

City of Hattiesburg v. Hercules, Inc. et al.

Case No. 2:13-CV-208-KS-MTP

Kevin Boyle, PhD.

December 2, 2015

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Ex. 1

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IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
EASTERN DIVISION

CITY OF HATTIESBURG, :
 :
Plaintiff, : CASE NO:
 :
vs : 2:13-cv-208-KS-MTP
 :
HERCULES, INC., et al., :
 :
Defendant. :
 :

VIDEOTAPED DEPOSITION OF KEVIN BOYLE, Ph.D.

DATE: December 2, 2015
TIME: 9:00 a.m.
LOCATION: 55 East Main Street
Christiansburg, VA 24073

REPORTER: CECELIA BROOKMAN, RPR
Registered Professional Reporter

1 APPEARANCES:

2 For the Plaintiff:

3 LIGHTFOOT FRANKLIN WHITE, LLC
4 Attorneys at Law
400 20th Street North
5 Birmingham, AL 35203
205.581.0786
6 lradney@lightfootlaw.com
7 BY: MR. W. LARKIN RADNEY IV, ESQ.
8

9 For the Defendants:

10 BAKER DONELSON BEARMAN, CALDWELL & BERKOWITZ, PC
Attorneys at Law
4268 I-55 North
11 Jackson, MS 39211
601.351.2414
12 ryarborough@bakerdonelson.com
13 BY: MR. RICHARD F. YARBOROUGH, JR., ESQ.
14

15 ALSO PRESENT:

16 Mr. Steve Oakes, Videographer
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1 (9:03 a.m.)
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4 (Exhibits Nos. 1 and 2 were marked
5 for identification.)

6 THE VIDEOGRAPHER: On the record at
7 9:03 a.m. My name is Steve Oakes, the
8 videographer. Today's date is December the
9 2nd, 2015. We're taking the deposition of
10 Dr. Kevin Boyle.

11 We're in Montgomery County General
12 District Court, in Christiansburg, Virginia.
13 The style of the case is City of Hattiesburg
14 versus Hercules, Inc., et al.

15 Our court reporter is Cece, and if
16 you'd swear the witness in and the attorneys
17 please identify yourselves.

18 (The witness was duly sworn.)

19 MR. RADNEY: Larkin Radney for the
20 City of Hattiesburg, plaintiff.

21 MR. YARBOROUGH: Rick Yarborough for
22 the defendants Hercules and Ashland.
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| <p>1 KEVIN BOYLE, Ph.D., 2 having been sworn by the Registered Professional 3 Reporter, Cecelia Brookman, to tell the truth, the 4 whole truth, and nothing but the truth, testified as 5 follows: 6 7 EXAMINATION 8 BY MR. YARBOROUGH: 9 Q. At the outset, I don't think there 10 will be any stipulation other than deposition being 11 taken pursuant to the Federal Rules of Civil 12 Procedure, and I marked as Exhibit 1 the notice of 13 deposition. 14 Will you state your full name, 15 please. 16 A. Kevin John Boyle. 17 Q. Could you give me your address. 18 A. 275 Orchard Hill Lane, Newport, 19 Virginia. 20 Q. And you hold a doctorate in 21 economics? 22 A. Doctorate in agricultural economics. 23 Q. Agricultural economics. So I can 24 refer to you as Dr. Boyle?</p> | <p>1 August or in early September, I would take it that 2 you had about a month from the date of your retention 3 to the date of the generation of your report. 4 A. That would be correct. 5 Q. Since generating your report on 6 September 28th, have you done any other work on the 7 case? 8 A. The only work I've done is preparing 9 for this deposition with counsel. 10 Q. Let's talk about that. And I'm not 11 interested in exact conversations with counsel, but 12 just general, what did you do to get ready for your 13 deposition today. What did you view and who did you 14 speak with? 15 A. I did not speak with anybody but 16 counsel, and I reviewed the basic material that I had 17 gone over in preparing my report, to refresh my 18 memory. 19 Q. That would be your report and the 20 literature that you relied upon in generating your 21 report? 22 A. That would be correct. 23 Q. When was your meeting with counsel? 24 A. Yesterday.</p> |
| Page 6 | Page 8 |
| <p>1 A. Yes. 2 Q. That's a Ph.D.? 3 A. Yes. 4 Q. Dr. Boyle, you have been retained by 5 counsel for the City of Hattiesburg, Mississippi, to 6 serve as an expert witness in this litigation, have 7 you not? 8 A. Yes. 9 Q. When were you retained? 10 A. I don't remember the exact date, but 11 it was late August, beginning of September of this 12 year. 13 Q. That's of this year? 14 A. Yes. 15 Q. I'm going to hand you which I earlier 16 provided you before we started your deposition, which 17 I marked as Exhibit 2, and ask you if you will 18 confirm that in connection with your retention, you 19 generated an expert report in this litigation? 20 A. That's my expert report and my CV. 21 Q. And I believe that the report is 22 dated September 28th, 2015; is that correct? 23 A. That is correct. 24 Q. Now, if you were retained in late</p> | <p>1 Q. And where was that held? 2 A. At a hotel in Blacksburg. 3 Q. And how long was that meeting? 4 A. It was most of the day. 5 Q. Was that the occasion that you 6 reviewed the materials that you just told me about? 7 A. No, I reviewed the materials in 8 advance of that meeting, also. 9 Q. So what was done yesterday in 10 addition to the review of materials? 11 A. We went through the materials 12 together. 13 Q. In this report that you prepared, 14 generally what you've done is taken the facts -- 15 there have been certain facts that have been provided 16 you in this case, and you've assigned various degree 17 percentages of property diminution to certain 18 properties surrounding the Hercules site at 19 Hattiesburg? 20 MR. RADNEY: Object to the form. 21 BY MR. YARBOROUGH: 22 Q. That's generally what your report 23 was. 24 THE WITNESS: Can I just have that</p> |

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| <p>1 read back to me, please. 2 (The record was read by the reporter 3 as requested.) 4 THE WITNESS: I've taken information 5 related to the Hattiesburg case and used 6 them to calculate the percentage diminution. 7 BY MR. YARBOROUGH: 8 Q. That's what I was asking just in a 9 general sense. How many occasions have you prepared 10 an expert report in similar circumstances, in a 11 setting similar to this, prior to this one? 12 A. What do you mean by similar? 13 Q. Well, I mean, where you have gone in 14 and looked or assigned property diminutions around a 15 contaminated site in an environmental setting, and 16 issued an expert report in litigation. 17 A. I have done two previous ones. 18 Q. Two previous ones. And are those 19 identified in your expert report? Have you provided 20 information concerning those? 21 A. One of those I have. 22 Q. Tell me which one that is. 23 A. That's the Duncan, Oklahoma, case. 24 Q. And that was a case involving</p> | <p>1 addressed, in a litigation setting, alleged property 2 diminution which may have resulted as a result of 3 contamination, environmental contamination? 4 A. That is correct. 5 Q. How many times have you testified in 6 court in your field of expertise? 7 A. Twice. 8 Q. And one of those had been in the 9 Duncan, Oklahoma, in connection with the Duncan, 10 Oklahoma, retention? 11 A. No. 12 Q. Tell me about your court involvement. 13 A. My first court was in Vermont, where 14 a developer cut timber on the state's only wilderness 15 area, and bulldozed a road down to the lake for 16 access for rowing, and I testified on the damages to 17 the state from the illegal timber harvesting and 18 bulldozing of the road. 19 Q. What state was that in? 20 A. Vermont. 21 Q. Approximately how long ago was that? 22 A. That would be 10 to 15 years. 23 Q. And was that before a judge or a 24 jury?</p> |
| Page 10 | Page 12 |
| <p>1 Halliburton? 2 A. Correct. 3 Q. And what about the second? 4 A. The second one, I'm under a 5 confidentiality order, and it was never completed. 6 Q. Where was -- you can't even tell me 7 where the site was? 8 A. I don't think I'm supposed to say 9 anything about that case. 10 Q. Can you tell me how long ago it was? 11 A. 10 to 15 years. 12 Q. 10 to 15 years ago? 13 A. Yes. That's a rough guess. 14 Q. Did you prepare an expert report? 15 A. I did not prepare a report that was 16 submitted. 17 Q. But you did a similar type study as 18 what you did here? 19 A. I did an analysis of property values. 20 Q. And was that in the litigation 21 context? 22 A. Yes. 23 Q. And those are the only two occasions, 24 prior to your assignment in this case, where you have</p> | <p>1 A. Judge and jury. 2 Q. And what was the second occasion that 3 you have testified in court? 4 A. The second was when the Clinton 5 administration closed down timber harvesting on the 6 Tongass National Forest. There were two pulp and 7 paper companies operating in the area. One was 8 insolvent, and their note was owned by a conglomerate 9 of Japanese industry banks, and they sued the U.S. 10 government for breach of contract, and I was a 11 witness for the U.S. government. 12 Q. Are those the only two occasions 13 you've testified in court? 14 A. Yes, they were. 15 Q. And neither one of those involved the 16 issue of environmental contamination? 17 A. Well -- 18 Q. Chemical contamination. 19 A. Neither of them involved chemical 20 contamination. 21 Q. So the issue that you've addressed in 22 your report, that you tendered here, would be totally 23 different from the issues that you addressed in your 24 prior two occasions in court?</p> |

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| <p style="text-align: right;">Page 13</p> <p>1 A. Well, the basic conceptual framework 2 when you think about values as an economist, would be 3 similar, across them, basically operating from a 4 microeconomics framework that would be common to 5 underlying them. 6 Q. But you weren't addressing a 7 situation anywhere analogous here, factually, in 8 terms of an impact of environmental contamination on 9 surrounding properties? 10 A. I was not on contamination on 11 surrounding properties. 12 Q. Thank you. So I take it, then, 13 you've never have been tendered as an expert witness 14 in a court report proceeding in that particular area, 15 chemical contamination, impact on surrounding 16 properties? 17 A. So I was -- if you mean by tendered, 18 I'd interpret that the same as retained? 19 Q. Perhaps my question was clumsy. Let 20 me say, you've never been accepted by a court in any 21 litigation where you sought to -- and recognized as 22 an expert in the field that you're addressing here in 23 this particular report, environmental contamination? 24 This is the first time?</p> | <p style="text-align: right;">Page 15</p> <p>1 A. Civil, I believe. It's not a 2 regulatory. 3 Q. Who were the plaintiffs bringing that 4 claim? 5 A. The one in New Jersey is the Attorney 6 General of New Jersey and the DEQ, and then in 7 Puerto Rico, I am not sure exactly whether it's an 8 attorney general or the Department of Environmental 9 Quality. 10 Q. And who retained you in these two 11 cases? What entity retained you? 12 A. I was working with a law firm of Jack 13 E. Dema. 14 Q. What party were they representing? 15 A. They were representing the State of 16 New Jersey and Puerto Rico in each of those cases. 17 Q. That would be the plaintiffs, the one 18 initiating the litigation? 19 A. Yes. 20 Q. Has all of your retentions to date, 21 in the legal context, been on the side of the 22 plaintiff? 23 A. No. 24 Q. Which ones were not?</p> |
| <p style="text-align: right;">Page 14</p> <p>1 A. I have been accepted in the courts in 2 terms of environmental contamination. 3 Q. Chemical contamination? 4 A. Chemical contamination, in NTBE cases 5 in New Jersey. 6 Q. You didn't tell me about those. 7 Maybe my question was not precise enough. 8 So in addition to these two other 9 times you've testified in court, there's others? 10 A. No. When I interpret what your 11 question is, when you asked me if I was accepted, 12 there were cases in NTBE cases where there were 13 Daubert challenges that the judge ruled that my 14 testimony was acceptable, and that's the way I 15 interpreted your question. 16 Q. Can you identify that particular case 17 for me? 18 A. There's an NTBE case in New Jersey. 19 I don't remember the name of it offhand. It's in my 20 deposition history, where there were 10 oil companies 21 that are in that case. And then there's one in 22 Puerto Rico that's also my deposition. 23 Q. Is this in a regulatory proceeding or 24 a civil proceeding?</p> | <p style="text-align: right;">Page 16</p> <p>1 A. I've worked on a number of different 2 ones, and I'll have to go way back. I don't remember 3 all of them. The first case I've worked for the 4 defendant was Eagle Mine case in Colorado, which was 5 the first natural resource damage case, I believe 6 back in the mid 1980s. 7 Q. And was that a case you just prepared 8 a report and never testified or gave a deposition? 9 A. I never testified, gave a deposition 10 or provided a report in that one. 11 Q. Didn't do any of that? 12 A. No. 13 Q. Any other retentions? 14 A. I was retained by Exxon in the Exxon 15 Valdez case. 16 Q. Did you prepare a report in that 17 case? 18 A. There were documents prepared but 19 there was no final report prepared because that case 20 was settled. 21 Q. I take it from your earlier testimony 22 regarding both of those, you were not -- you didn't 23 testify as an expert in connection with that 24 litigation?</p> |

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| <p>1 A. The first one I was a research 2 analyst when I was in graduate school. The second 3 one, it settled. It didn't go to court. 4 Q. Make sure I understand how many 5 depositions you've given. Maybe we covered them. 6 Have we, in the matters that you've actually given a 7 deposition? I take it it would be -- is it three? 8 A. No, there are more that I've given 9 depositions. 10 Q. Approximately how many? 11 A. I would have to check. Probably 12 somewhere in the range of 10. 13 Q. Within the last five years, how many 14 depositions have you given? 15 A. Maybe in the range of five. 16 Q. The percentage of your time over the 17 past five years would you say was involved being 18 retained as an expert in connection with litigation, 19 would it be a very small part, just only five times 20 in five years? 21 A. I would say it's a small part of my 22 time. 23 Q. Would you say it's a miniscule part 24 of your time, over the past five years?</p> | <p>1 firms, or governments or other types of entities 2 make, and the implied values, benefits and costs that 3 occur due to those decisions. 4 Q. And do you hold any type of license 5 or is this just a degree that you hold? 6 A. I have a Ph.D. 7 Q. And was that in 1983, you said? 8 A. I have to check. I think it's '84. 9 Q. And where did you receive that? 10 A. University of Wisconsin. 11 Q. Now, in your expert report that you 12 have there before you, am I correct that you predict 13 future diminution in value of properties around the 14 Hercules site at Hattiesburg? 15 A. I predict the values that would be a 16 diminution in property values due to the 17 contamination of properties, the contamination that 18 arose from the Hercules facilities. 19 Q. As I understand your report, and 20 correct me if I'm wrong, has this diminution, does it 21 presently exist? 22 A. It may have started to but I don't 23 think that it would be fully manifested at this time. 24 Q. Where do you get that idea, that it</p> |
| Page 18 | Page 20 |
| <p>1 A. I don't know what you mean by 2 miniscule. 3 Q. It's certainly not a large component 4 of your body of work in your field of economics, is 5 it? 6 A. No, most of my time is as a faculty 7 member. 8 Q. I mean, you know that there are 9 individuals who spend the majority of their time in 10 court as expert witnesses. That's how they earn a 11 living. You're not one of those individuals, so to 12 speak? 13 A. I don't earn my living as an expert 14 witness. 15 Q. I understand you have a degree in 16 agricultural -- 17 A. Economics. 18 Q. -- economics. So you're an 19 economist? 20 A. Correct. 21 Q. Why don't you tell me what an 22 economist is. 23 A. An economist is someone who basically 24 studies tradeoffs and decisions that individuals or</p> | <p>1 may have started? 2 A. Well, there's some information about 3 contamination but the contamination has not been made 4 public, to my knowledge, so that everyone knows that 5 there could be potential contamination present in 6 their houses, that this was new information that has 7 just been developed in the past year. 8 Q. I'm really not asking about 9 contamination, sir. I'm asking about measured 10 diminution. You say it may have started, the 11 diminution may have started. What do you base that 12 on? How would you go about measuring that as of 13 today; as of today, as we sit here today? 14 A. I'm telling you -- you're saying -- 15 you're not talking about contamination, but 16 contamination is basically the agent that would be 17 present to affect people's decisions. 18 Q. I'm not arguing with you in any way, 19 but I need to get an answer to my question. You said 20 that the diminution has already started to some small 21 degree. 22 A. I said it may have started. 23 Q. Tell me, why do you say that? How 24 would you go about measuring that?</p> |

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| <p style="text-align: right;">Page 21</p> <p>1 A. Well, there's two ways that you would 2 go about measuring it. 3 Q. Let's go through those. 4 A. So the way that I went about doing it 5 is you take studies that have been done to look at 6 actual changes in property values in other places, 7 that have experienced contamination, and the effects 8 are shown in the market, and you use that to predict 9 what would be or what the contamination diminution in 10 value would be at the site, and the hit for the 11 community in Hattiesburg. 12 Q. And what would be the second way? 13 A. And the second would be to do an 14 actual market study in Hattiesburg, but that would 15 not be possible at this time because the market has 16 not had a chance to show all of the effects. And 17 then even if I wanted to do that, I would need 18 information on contamination in terms of every single 19 property in the community to do that market analysis, 20 and that information is not available. 21 Q. Now, when you say -- did I understand 22 you to say it was impossible to do a market study 23 now? 24 A. Right, because to do an economic</p> | <p style="text-align: right;">Page 23</p> <p>1 showed those effects. If those effects are not 2 there, you need to use information from another 3 market. 4 An appraiser could go out and do 5 appraisals as well, but the appraiser needs 6 comparable information, and still needs to have that 7 information have manifested itself in the market in 8 order to do an appraisal. 9 Q. So you would supplant your expertise 10 or overlay that upon a licensed appraisal in terms of 11 criticizing his ability to do an appraisal at this 12 time? 13 A. No. 14 Q. What are you telling me now? 15 A. I'm just telling you that you need 16 information in the market of the effects in order to 17 look at value. Both appraisers and economists look 18 at value. We just look at it different ways. I'm 19 not testifying as an appraiser or supplanting an 20 appraiser. I've worked with appraisers. We provide 21 complementary information. 22 Q. But again, in your expert report, do 23 you agree with me that you are predicting future 24 diminution in value of these properties that does not</p> |
| <p style="text-align: right;">Page 22</p> <p>1 analysis of the market, you would estimate a Hedonic 2 model. Let me finish -- can I finish my answer? 3 Q. Sure. 4 A. So you'd estimate a Hedonic model. A 5 Hedonic model would look at actual sales prices of 6 properties. That model, to estimate, would need to 7 be based on the people had full information of the 8 contamination that was present. But then I would 9 need a variable to put in the model for the 10 contamination, so you'd need to know what that 11 contamination condition was in each property, to 12 estimate that model. 13 Q. Doctor, maybe we're talking about 14 apples and oranges here, but when you say it's 15 impossible to go out there today and do a market 16 analysis, that's simply not true, is it? Couldn't a 17 licensed appraiser go out and do appraisals of 18 property around this site, and issue valid appraisals 19 as of this time? 20 A. So you're changing what I said. You 21 asked me what I would do as an economist, and I told 22 you that I would do two approaches. Listen, I'm not 23 an appraiser. I would do the established economic 24 approach which would be to estimate a model that</p> | <p style="text-align: right;">Page 24</p> <p>1 presently exist? 2 A. I would say that the values have 3 already been influenced. You'd need the transactions 4 to occur, with people having the knowledge to be able 5 to measure it. 6 Q. Let's go at it this way. You 7 predicted in your report that, just as an example, 8 that the single family residents have sustained or 9 will sustain roughly 15 percent diminution? 10 A. That is the prediction in my report. 11 Q. That diminution does not presently 12 exist, does it, if we were to do a market study? 13 A. I would say that there is an effect, 14 but the full effect is not there because people are 15 not fully aware of the contamination at this point in 16 time. 17 Q. I think that's what you've earlier 18 testified to and said in your report, so that's why I 19 asked the question. 20 So we're talking about a prediction 21 that you believe will take place in the future, that 22 will result in diminution of these property values? 23 A. That will be manifested when the full 24 information of the contamination is available.</p> |

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| <p style="text-align: right;">Page 25</p> <p>1 Q. In your report, you use -- I noticed 2 the word prediction or predict or predicted. In 3 fact, it's the fifth word in your report there. And 4 I went and Googled that, and one of the definitions I 5 found was an educated or informed guess. Would you 6 agree with that definition of prediction? 7 A. That's one type of prediction but 8 that's not the type of prediction that I did. 9 Q. You wouldn't define, use the word 10 predict or prediction as an informed or educated 11 guess? 12 A. I'm saying that's one type. I used a 13 statistical model to make a prediction. That's not 14 an informed guess. That's using actual information 15 to make a prediction. 16 Q. Now, you mentioned a couple times 17 that you have never worked as a real estate 18 appraiser. 19 A. I don't know if I've mentioned a 20 couple times. I'm not an appraiser. 21 Q. Let me ask you, have you ever worked 22 as a real estate appraiser? 23 A. No. 24 Q. Have you ever had any training in</p> | <p style="text-align: right;">Page 27</p> <p>1 A. I would not say it's markedly 2 different. We do the same things to look at values. 3 Appraisers typically look at three similar sales. As 4 an economist, we look at all sales in the market to 5 make our assessments. 6 Q. What sales did you look at in the 7 Hattiesburg market, to make your assessment in your 8 report? 9 A. In that one, what I did is I relied 10 on sales that had been done in other markets. I 11 believe there are about 58 studies that have been 12 done. And then a meta-analysis was done to summarize 13 those, and then you use that equation to make a 14 customized prediction of the impact in Hattiesburg. 15 Q. What sales or other market data did 16 you utilize that were taken from the immediate 17 Hattiesburg area in conjunction with preparation of 18 your report and issuance of opinions you reached? 19 Would the answer be none? 20 A. I did not use any Hattiesburg sales 21 in my report. I used the meta-analysis to make that 22 customized or tailored prediction. 23 Q. How many times have you been in 24 Hattiesburg?</p> |
| <p style="text-align: right;">Page 26</p> <p>1 real estate appraisal? 2 A. No. 3 Q. Have you ever had a license in real 4 estate appraisal? 5 A. No. 6 Q. Isn't it true -- are you aware that 7 most states require real estate appraisers to be 8 licensed? 9 A. I understand that real estate 10 appraisers are licensed. 11 Q. And that requires formal training and 12 examination, oversight under a supervisor prior to 13 licensure. Are you aware of that? 14 A. I'm aware of that. I'm head of the 15 real estate program at Virginia Tech. We teach our 16 students about appraisals. We have appraisers come 17 in and talk to them about what they do, and I've done 18 work for appraisers. Not appraising, but I just did 19 a study of customary and reasonable fees for Virginia 20 appraisers, to help them set their market fees to 21 meet the Dodd-Frank requirements. 22 Q. But what your work as an economist is 23 markedly different than what a licensed real estate 24 appraiser does; is that correct?</p> | <p style="text-align: right;">Page 28</p> <p>1 A. Once. 2 Q. And when was that? 3 A. That was a few years ago. 4 Q. That was not in any way involved with 5 this litigation, Hercules, Hattiesburg? 6 A. That is correct. 7 Q. So you've not even visited this 8 particular area in connection with your retention or 9 preparation of your report? 10 A. I have not. 11 Q. Never been around these properties? 12 Can you describe the neighborhood around the site? 13 A. I basically looked at it on Google 14 Earth, and gone down and looked at the streets to 15 know what it looks like around there, and know that 16 the university is nearby, to the west, I believe, and 17 that there's some other industrial properties, 18 probably to the north, and residential to the south. 19 Q. What's the name of the university 20 that's there? Do you know? 21 A. I forget the name of it right now. 22 Q. Does the University of Southern 23 Mississippi sound right? 24 A. Southern Mississippi.</p> |

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| <p style="text-align: right;">Page 29</p> <p>1 Q. Could it be Ole Miss? 2 A. No, it's not Ole Miss. 3 Q. What about Mississippi State? 4 A. It's not Mississippi State. 5 Q. Do you know what counties in 6 Mississippi that the municipal boundaries of the City 7 of Hattiesburg lie? 8 A. I don't remember the county names 9 right now. I remember that there is a county line 10 that cuts nearby but I don't remember the name of the 11 county lines. 12 Q. Do you know how many counties are 13 encompassed in the Hattiesburg city limits? 14 A. I don't know that right now. 15 Q. And you don't know the names of the 16 counties? 17 A. I don't remember the names of the 18 counties. 19 Q. When you have worked in these earlier 20 cases -- let me just ask you about the Duncan case, 21 in which -- this was a case that you'd been retained 22 earlier in litigation in a claim against Halliburton; 23 is that correct? 24 A. Yes.</p> | <p style="text-align: right;">Page 31</p> <p>1 properties that were involved? 2 A. I did. 3 Q. Did you get any other information 4 that was local to the Duncan area, that assisted you 5 in preparation of your report in that case? 6 A. I got information similar to -- in 7 Duncan, similar to this one that assisted me in the 8 case. I'm not sure whether I got it on that trip or 9 this trip. 10 At that trip, I went around and 11 looked at properties because that was a different 12 case than this one. In that case, what we were 13 looking at was, as you said, it was a class action, 14 and individual properties, and my results were going 15 to be combined or I had to rely on an appraiser who 16 was giving me the values of the individual properties 17 that the percentage diminution was applied to. 18 In this case, we weren't thinking 19 about individual properties, we were just thinking 20 about what the overall tax loss was to the community 21 of Hattiesburg. So it was a different context in 22 what we were looking at specifically. 23 Q. So in your trip to Duncan, you met 24 with some local real estate appraisers?</p> |
| <p style="text-align: right;">Page 30</p> <p>1 Q. And you were working for the 2 plaintiffs in that case? 3 A. I was. 4 Q. And those were property owners around 5 the Halliburton site? 6 A. Yes. 7 Q. Did you -- before you issued a 8 report -- did you issue a report in that case? 9 A. Yes. 10 Q. Before you issued a report in that 11 case, did you travel to Duncan? 12 A. I did. 13 Q. Did you visit the site? 14 A. I did. 15 Q. You felt in that situation, it was 16 important enough for you to go down -- where was 17 that -- when you initiated that trip, did you leave 18 the Virginia area and travel to Duncan, Oklahoma? 19 A. Yes. 20 Q. For the purpose of -- on of the 21 purposes was visiting that area of real estate that 22 was involved in the litigation? 23 A. Yes. 24 Q. And did you go out and look at the</p> | <p style="text-align: right;">Page 32</p> <p>1 A. I met with some appraisers and 2 realtors and attorneys. 3 Q. And during those meetings did you 4 obtain some market data that was generated there in 5 Duncan, Oklahoma, pertinent to these properties? 6 A. Not at those meetings. It was 7 provided to me subsequently. And the market data was 8 different in that case because Halliburton was 9 buying, or in the process of buying up properties of 10 the plaintiffs, and we needed the sale prices of 11 those properties. Then the appraised value was not 12 actual market sales but it was the appraisers going 13 in and appraising the properties without 14 contamination. 15 Q. What you're telling me, as I 16 understand it, was that your retention in the Duncan, 17 Oklahoma, litigation was such that you felt like you 18 needed to go down and visit the site, meet with 19 attorneys and real estate people. Was it some 20 brokers, real estate brokers that you mentioned? 21 A. I didn't say brokers. I do not know 22 what their specific designations were right at this 23 time. 24 Q. But the Hattiesburg site is so</p> |

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| <p>1 different, you didn't need to do any of that. Your 2 assignment of what the issue you were addressing in 3 Hattiesburg differed and that's why you didn't need 4 to go to Hattiesburg? 5 A. Can you ask that question? There's a 6 lot of different parts to what you said there. 7 Q. I'm not trying to confuse you. What 8 I understood you to tell me, the issues you were 9 addressing in the Duncan, Oklahoma, litigation, you 10 needed to make a trip there and get certain 11 information that was there local, and that helped you 12 in doing the work that you were asked to do in the 13 Duncan, Oklahoma, litigation. But here in the 14 Hattiesburg case, you didn't need to do that to 15 address the issues you were asked to address? 16 MR. RADNEY: Object to the form. 17 THE WITNESS: I was not collecting 18 data in there. I went down to understand 19 the layout of the community and where 20 properties were, because we were going to be 21 making predictions for individual 22 properties. 23 The difference here wasn't saying 24 anything about the Hattiesburg or Duncan</p> | <p>1 A. I'm not saying the market data isn't 2 germane. I'm saying that when you have new 3 information in the market that people do not fully 4 have, then that market information cannot be relied 5 on in a credible economic analysis used in the 6 standard procedures of the literature. 7 Q. How long were you in Duncan? Did you 8 all make one trip? 9 A. I made one trip. 10 Q. How long were you there? How many 11 days? 12 A. I was just there one day. 13 Q. And how many people, total, did you 14 meet with during that trip? 15 A. Maybe about nine, 10. 16 Q. In conjunction with your work in the 17 Hattiesburg case, you've told me earlier that since 18 you've not been to Hattiesburg, you wouldn't have met 19 with anyone there, but have you interviewed anyone 20 from the Hattiesburg area, be it a real estate 21 appraiser, a lender, a mortgage originator, a real 22 estate salesperson, someone in the field of real 23 estate, who addresses, as a result of their 24 profession and their work, property values in the</p> |
| Page 34 | Page 36 |
| <p>1 contamination sites. Here the difference 2 was is I was asked to do a different 3 question in terms of just looking at the tax 4 losses to the City of Hattiesburg. 5 BY MR. YARBOROUGH: 6 Q. So a trip to Hattiesburg would have 7 been meaningless to the work you were doing? 8 A. I don't think it would have changed 9 my report at all. 10 Q. Would it have provided you any 11 information you might have utilized had you been 12 there? 13 A. I don't think going to Hattiesburg 14 would have changed my report. 15 Q. It would have just been a waste of 16 time to go? 17 A. I don't know whether it would have 18 been a waste of time. I don't think it would have 19 influenced my report. 20 Q. Because the local information there, 21 the market data and what have you, is not germane -- 22 you don't view that as important. You're looking at 23 what's happened at other sites in generating these 24 diminution values. Is that what you're saying?</p> | <p>1 Hattiesburg area? 2 A. I have not interviewed anyone. 3 Q. Would information like that -- so 4 information like that was not important to you in 5 your work, in connection with preparing your report 6 and giving your opinions in this case? 7 THE WITNESS: Can I have that read 8 back to me. 9 (The record was read by the reporter 10 as requested.) 11 THE WITNESS: What I'm saying is 12 information on the Hattiesburg market would 13 not have been appropriate for a credible 14 economic analysis because the information 15 that -- on the contamination that's not been 16 fully disbursed to people in the market. 17 When you do a Hedonic analysis, which 18 is the economic approach where you look at 19 how property prices are affected by 20 attributes of property, those -- there has 21 to be the reasonable knowledge that buyers 22 and sellers have that information in their 23 hands when they're making the transactions. 24 When the new information about the</p> |

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| <p>1 dust contamination from -- excuse me -- from 2 the dioxathion, toxaphene are in the attics 3 that just occurred this year, there's no way 4 that that information can be fully 5 assimilated into the market at this time. 6 BY MR. YARBOROUGH: 7 Q. When will it be assimilated? Can you 8 predict that? 9 A. I cannot predict when it will be 10 assimilated. 11 Q. I may have asked you this. I'm 12 shifting gears here. You told me you never worked as 13 a real estate appraiser. Have you ever worked as a 14 real estate broker or real estate agent? 15 A. I have not. 16 Q. You never listed any houses for sale 17 or commercial properties, or things of that nature? 18 Never been licensed to do that? 19 A. I've listed properties for sale, but 20 I've sold them on my own. 21 Q. Not for any third party, not in a 22 professional sense? 23 A. No. 24 Q. Are you familiar with a -- this is a</p> | <p>1 senior residential appraiser, would that ring a bell 2 or not. You just don't know? 3 A. That's possible. I don't have all 4 the different appraisal designations in my memory. 5 Q. And you don't hold a designation, 6 either, as an MAI appraiser or a SRA appraiser? 7 A. I answered that I'm not an appraiser 8 so I'm not any type of appraiser. 9 Q. Have you ever heard of the acronym in 10 connection with appraisers called ASB? 11 A. I have heard of the acronym but I'm 12 not remembering what the words are that go with it 13 right now. 14 Q. What about the acronym USPAP? 15 A. I don't remember hearing that one. 16 Q. Let me ask you this. I'm not trying 17 to test your acronym knowledge, necessarily, but are 18 you familiar, have you ever heard of the Uniform 19 Standards of Professional Appraisal Practice? 20 A. Yes. 21 Q. The USPAP. Does that help? 22 A. Yes, I'm familiar with them. 23 Q. I may have asked you this, I'll move 24 on. You don't hold any real estate license and never</p> |
| Page 38 | Page 40 |
| <p>1 real estate question -- a membership designation 2 called MAI? 3 A. Yes. 4 Q. What does MAI stand for? 5 A. MAI is, I believe, the highest 6 designation that an appraiser can have. 7 Q. And I believe you said you, in your 8 work, you work with appraisers from time to time? 9 A. Yes. 10 Q. Have you worked with MAI appraisers? 11 A. Yes. 12 Q. And do you recognize their expertise 13 in the appraisal field? 14 A. Yes. 15 Q. That MAI, does it stand for the 16 appraisal institute? 17 A. Yes. 18 Q. Are you familiar with a designation 19 conferred by the appraisal institute, known as SRA? 20 A. I have heard of SRA before. 21 Q. Do you know what SRA stands for? 22 A. I don't remember what that is right 23 at this time. 24 Q. If I told you that it stood for</p> | <p>1 have? 2 A. No. You've asked and I've answered 3 that. 4 Q. In any state? 5 A. I do not hold a real estate license 6 in any state. 7 Q. And never have? 8 A. Never have, but I do have extensive 9 experience, from an economic perspective, studying 10 the effects of environmental conditions on property 11 values. I have over two decades of experience as an 12 economist, publishing in the top journals in our 13 field and using that to support decision making. 14 Q. Are you licensed by any state to 15 evaluate the effects of market values, of detrimental 16 conditions to real property? 17 A. I've answered before that I don't 18 have any license. As an economist there's no 19 licensures that we are provided or eligible for. 20 Q. Would it be true that -- I guess it 21 would be a violation of law for you to travel to 22 Hattiesburg, examine a given property, and issue an 23 appraisal in terms of fair market value in the lender 24 context. That would be improper for you to do in</p> |

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| <p>1 that you're not qualified to do that?</p> <p>2 A. A lender could not use an assessment</p> <p>3 of value that I did as an economist.</p> <p>4 Q. And I think maybe you've answered my</p> <p>5 question. Let me ask it a little simpler. If we</p> <p>6 could reach an agreement on price and terms, and I</p> <p>7 had one of these homes that's addressed in your</p> <p>8 report, and I asked you if you could go down to</p> <p>9 Hattiesburg and issue a formal appraisal for me, that</p> <p>10 I would use in connection with either the sale of the</p> <p>11 house or a loan on my house, it would be illegal for</p> <p>12 you to do that, wouldn't it, because you're not</p> <p>13 licensed to do that?</p> <p>14 A. I don't know whether it would be</p> <p>15 illegal. I could offer my opinion on the value. I</p> <p>16 wouldn't be presenting myself as an appraiser. But I</p> <p>17 do not believe, under Dodd-Frank, that the bank could</p> <p>18 use that information. They have very stringent rules</p> <p>19 that they have to follow.</p> <p>20 Q. And the bank or any third party, an</p> <p>21 interested buyer or something like that, you couldn't</p> <p>22 take on a liability like that, not being a licensed</p> <p>23 appraiser, could you?</p> <p>24 A. I don't understand what you're</p> | <p>1 Q. I mean, employed as an employee?</p> <p>2 A. I'm employed as an employee of</p> <p>3 U.S. EPA.</p> <p>4 Q. What do you do for the EPA?</p> <p>5 A. I am on the U.S. EPA science advisory</p> <p>6 board, economics committee, and I'm on the clean air</p> <p>7 scientific advisory committee for the U.S. EPA.</p> <p>8 Q. Is this an appointment? Are you</p> <p>9 compensated?</p> <p>10 A. It's an appointment that I'm</p> <p>11 compensated for.</p> <p>12 Q. What portion of your time do you</p> <p>13 spend, over the last year, in connection with those</p> <p>14 apartments?</p> <p>15 A. Very small. A few days.</p> <p>16 Q. Do you receive a W-2 form from the</p> <p>17 EPA for what little work you do for them?</p> <p>18 A. I believe, yes, I do.</p> <p>19 Q. You don't know whether it's a W-2 or</p> <p>20 1099?</p> <p>21 A. Oh, okay. It's a 1099. Sorry.</p> <p>22 Q. Would you be more like an outside</p> <p>23 consultant as opposed to a W-2 employee?</p> <p>24 A. No. I'm a special government</p> |
| Page 42 | Page 44 |
| <p>1 asking.</p> <p>2 Q. We'll move on, then.</p> <p>3 Do you claim any expertise in the</p> <p>4 field of environmental engineering?</p> <p>5 A. No.</p> <p>6 Q. What about the field of toxicology?</p> <p>7 A. No.</p> <p>8 Q. Public health issues?</p> <p>9 A. No, except for those are all fields</p> <p>10 that I use their information in my analysis, which is</p> <p>11 standard for most economists.</p> <p>12 Q. I understand you can read and use</p> <p>13 information, but you don't hold yourself as an expert</p> <p>14 in the field of public health, do you?</p> <p>15 A. No.</p> <p>16 Q. Do you claim any expertise in the</p> <p>17 field of environmental laws and regulations?</p> <p>18 A. No.</p> <p>19 Q. And you're not an attorney?</p> <p>20 A. No.</p> <p>21 Q. Have you ever been employed by the</p> <p>22 United States EPA?</p> <p>23 A. I am currently employed by the</p> <p>24 U.S. EPA.</p> | <p>1 employee, so I'm not a consultant.</p> <p>2 Q. Do they withhold wages from your</p> <p>3 paycheck?</p> <p>4 A. Do you mean do they withhold taxes?</p> <p>5 Q. Yes, like on a W-2.</p> <p>6 A. No, they don't because I don't claim</p> <p>7 any restrictions there.</p> <p>8 Q. You don't go around holding yourself</p> <p>9 out to be an employee of the U.S. government, the</p> <p>10 EPA, do you?</p> <p>11 A. No. I was just answering your</p> <p>12 question honestly, as you asked it before.</p> <p>13 Q. Same question about any state</p> <p>14 counterpart of environmental agency, Department of</p> <p>15 Environmental Quality, state environmental agencies.</p> <p>16 Have you ever -- are you an employee of any of those</p> <p>17 counterparts?</p> <p>18 A. Could you ask that question clearly,</p> <p>19 please.</p> <p>20 Q. Have you ever been employed by a</p> <p>21 state Department of Environmental Quality?</p> <p>22 A. No.</p> <p>23 Q. Do you hold a degree, license, or</p> <p>24 certification in the field of statistics?</p> |

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| <p>1 A. I don't hold a degree or a 2 certification but I've taken many classes in 3 statistics and econometrics, which is the economic 4 use of statistics, from when I was an undergraduate 5 through a graduate student, and statistics are the 6 core of what I do in applied economics. 7 Q. Do you hold yourself out as an expert 8 statistician? Do you go into court proffering 9 yourself as an expert in that field? 10 A. I would not proffer myself as a 11 statistician, but I would offer testimony on 12 statistics, as an economist. 13 Q. You told me at the outset of the 14 deposition, Dr. Boyle, that you were retained in, I 15 believe August or early September of this year? 16 A. That's the best of my memory. I 17 didn't go back and check that. 18 Q. Who exactly retained you to do your 19 work in this case? 20 A. The attorney. 21 Q. Larkin, here? 22 A. Yes. 23 Q. Did you know him before this contact? 24 A. No.</p> | <p>1 A. Everything is right here in my 2 report. Let me go back. 3 Q. Interest rate, unemployment rate. 4 A. So distance was also from Mr. Horsak. 5 Unemployment rate, interest rate. Those are the key 6 pieces of information that I used. 7 Q. Was the interest rate that you 8 utilized in any way affected, related to the City of 9 Hattiesburg, Mississippi, or is this some rate 10 nationally? How did you select that? 11 A. It was information on the local rate 12 in Hattiesburg. 13 Q. I'm sorry, what rate? 14 A. Local rates in the Hattiesburg area. 15 Q. And you just found that online or in 16 some publication? 17 A. That was information online. 18 Q. And what about the employment rate? 19 Was that for the State of Mississippi or Hattiesburg? 20 A. So that was U.S. Bureau of Labor 21 Statistics data for the Hattiesburg metropolitan 22 statistical area, and the interest rate was 23 Hattiesburg-Laurel, Mississippi. 24 Q. So the factual information in its</p> |
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| <p>1 Q. Do you know how he got in touch with 2 you, to retain you? 3 A. He learned of me through some other 4 individuals that know me. 5 Q. Were those attorneys? 6 A. Those are economists. 7 Q. Before we return to your report 8 that's been marked as Exhibit 2, can you describe for 9 me, as you sit there, the information -- all the 10 information that you were provided with? And I'd 11 like to segregate for a moment, articles and things 12 that you reviewed versus facts that you were provided 13 with, in connection with preparing your report. 14 A. So I was provided information on 15 contamination with excerpts from Mr. Horsak's report. 16 I was provided with information on the number of 17 properties with -- 18 Q. Did you say number? 19 A. Number of properties affected, which 20 was from Ms. Herrin's report. And then other 21 information was from public sources such as 22 unemployment rates and interest rates. 23 Q. Can you run through the subject of 24 the public sources?</p> | <p>1 entirety that you utilized -- and again, I'm putting 2 aside your literature that you relied on, but just 3 the factual information you were provided, one were 4 contamination excerpts from the Horsak report; the 5 indication of the number of properties involved from 6 the Herrin report; the distance factor -- I don't 7 know that you said factor, but distance provided by 8 the Horsak report; and the information that you 9 generated yourself, from public sources, the interest 10 rate, unemployment rate. Does that cover all of 11 them? 12 A. That covers the information that's 13 not in the publications. There's other factual 14 information in the publications. 15 Q. So you took this information, and 16 applied your knowledge, learning, expertise and the 17 literature that you relied upon, and generated your 18 expert report? 19 A. I think that's correct. I used the 20 information -- my professional knowledge of this 21 information, yes. 22 Q. That would be generally how any 23 expert report would be prepared. 24 A. I don't want to -- that's the</p> |

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| <p style="text-align: right;">Page 49</p> <p>1 standard of what I do. I don't want to testify for 2 other experts. 3 Q. Well, I can stipulate to that's 4 generally the standard, in my experience. 5 What individuals have you spoken 6 with, other than the attorneys who retained you, 7 about the case and your work on the case? 8 A. I have not spoken to anyone else 9 about the case. 10 I could use a bathroom break whenever 11 it's convenient for you. 12 MR. YARBOROUGH: Any time. 13 THE VIDEOGRAPHER: Off the record at 14 9:57 a.m. 15 (A recess ensued.) 16 (Exhibit No. 3 was marked for 17 identification.) 18 THE VIDEOGRAPHER: On the record at 19 10:05 a.m. 20 BY MR. YARBOROUGH: 21 Q. Okay. Dr. Boyle, you testified 22 before our break about the factual matters that you 23 were provided with, in connection with your retention 24 and preparation of your report, and I'd like to turn</p> | <p style="text-align: right;">Page 51</p> <p>1 co-author, read the name of it? 2 A. So the articles that I'm an author or 3 co-author are ones that I cited in my background 4 experience, but they're not ones I relied on in 5 developing my report. 6 Q. So none of your work, in terms of 7 authorship that you've done in your career, you've 8 not authored any articles in your career that you 9 relied upon in issuing this report, your report here? 10 A. I relied on the general knowledge 11 from them, but not specific information that was used 12 in the report. 13 Q. Now, are these the same references, 14 generally speaking, that you utilized in connection 15 with the report that you generated in the Duncan, 16 Oklahoma, litigation? 17 A. Some are the same, some of the ones 18 from Duncan are not there. I'd have to compare, but 19 there are commonalities between them, and there are 20 differences. 21 Q. Would the report, the paper in the 22 Journal of Real Estate Research prepared by Simons 23 and Saginor, be one of the principal reports you 24 relied upon in preparing your report, Simons and</p> |
| <p style="text-align: right;">Page 50</p> <p>1 now to the literature, economic literature that you 2 relied upon in preparing your report, and I've handed 3 you what we marked as Exhibit 3 and ask you whether 4 that is a listing, in particular, a highlighted 5 listing of the articles that you reviewed and relied 6 upon in preparing your report. 7 A. It appears to be a listing of records 8 from my report, yes. 9 Q. This was the only copy so I may want 10 to look over here, at it. It appears that there are 11 approximately 12 or so articles, and did you author 12 any of these articles? I recognize Boyle on a 13 couple. Or is this another Boyle? 14 A. Can I just look for a minute, because 15 there is another Boyle in some of them. So not all 16 of them that are highlighted have Boyle on them, so I 17 didn't -- so I'm confused on that. 18 Q. Let me ask you my question. Did you 19 author any of these reports that you relied on? 20 A. I did author some of them, but the 21 Boyle and Kyle is a different Boyle that's not 22 related to me. 23 Q. Would you identify the articles that 24 you relied on, that you were either an author or</p> | <p style="text-align: right;">Page 52</p> <p>1 Saginor? 2 A. Yes. 3 Q. I realize all of these may have had 4 some role in your review. Would that be one of the 5 ones that kind of stands out as the most important? 6 A. I wouldn't say that. It's an 7 important one that's fundamental to what I did. 8 Q. And some of these are less important? 9 A. Yes. 10 Q. I see one here, The Effect of an 11 Aquatic Invasive Species on Lake Front Property 12 Values. 13 A. That's one I'm a co-author on, I said 14 I didn't rely on. That was just part of my general 15 experience, looking at property values. 16 Q. We're going to talk about the Simons 17 and Saginor report a little bit later in your 18 deposition, but I wanted to move on. I try not to 19 ask the same questions over, but I'm going to ask 20 this one, and I apologize if I have, but it's an 21 important one and I promise I won't ask you again. 22 You didn't collect any real sales or 23 market data from Hattiesburg in connection with the 24 preparation of your expert report?</p> |

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| <p>1 THE WITNESS: Can I have that read 2 back to me, please. 3 (The record was read by the reporter 4 as requested.) 5 THE WITNESS: I did not collect any 6 sales. I'd consider some of the 7 information, like the interest rate and 8 unemployment rates part of what you consider 9 part of the market data. 10 BY MR. YARBOROUGH: 11 Q. In terms of real estate transactions, 12 lending transactions, sales listings in Hattiesburg, 13 things of that nature, you didn't obtain or collect 14 any real property information like that? 15 A. I did not collect any property sales 16 data. 17 Q. And I take it, then, you have no 18 information about sales, loan market activity in 19 Hattiesburg, Mississippi, whether it's vibrant or 20 poor, or midstream? You don't have any information 21 about that? 22 A. I saw information on that in, just, 23 you know, some of the -- I did a background, looking 24 on the internet when I got going but it's not in my</p> | <p>1 expertise. I reviewed his report after I did mine, 2 and you know, he stated his qualifications in that 3 report, but I'm not in the position to testify on 4 what his qualifications are. 5 Q. Fine. You really don't know anything 6 about him. Never worked with him before? 7 A. I've never worked with him before. 8 Q. Couldn't tell me whether he's 9 reliable or competent in his field. You just don't 10 know anything about him? 11 A. All I know is what's provided in his 12 report, and the credentials that he provided in his 13 report. 14 Q. Now, what was it -- tell the court 15 and the jury, what was it exactly in his report that 16 you utilized and was important to you in addressing 17 the issues you were asked to address, in generating 18 your expert report? 19 A. It was that there was detects of dust 20 with contaminants of dioxathion and toxaphene, that 21 those were spread over a broad area, that they were 22 more likely than not to be detects, and basically, 23 the range of those detects. 24 Q. Let me see if I can break that down a</p> |
| Page 54 | Page 56 |
| <p>1 report. I didn't rely on it. 2 Q. You didn't rely on any of that. 3 Are you aware of any -- let's talk 4 about distance. You mentioned the Horsak distance. 5 Why don't you tell me more about that, since we 6 haven't touched on that. 7 A. So my understanding is the distance 8 from Horsak that was provided, is the distance from 9 the fence line of the Hercules facility to the most 10 distant test site that detected dust with 11 contaminants, basically based on these pictures from 12 the Horsak report. 13 Q. So the record will be clear, let me 14 do a little backfilling, so somebody reading this 15 maybe will know what we're talking about. 16 Mr. Horsak is another expert that was 17 retained by the City of Hattiesburg in this case? 18 A. Is that a question? 19 Q. Yeah, I'm asking that. 20 A. That's my understanding, yes. 21 Q. And he has a science background in 22 chemical environmental, of some sort, background; is 23 that correct? Or tell me what you know about him. 24 A. I'm not prepared to testify on his</p> | <p>1 little bit. Do you know exactly how many properties 2 were sampled, were sampled for contaminants in attic 3 dust? Feel free to review your report. 4 A. I'm not sure I even said how many 5 were in my report. I can go back and look, but I'm 6 not sure I did. I know that there was two rounds of 7 sampling that were done, and that -- 8 Q. If I suggested to you it was roughly 9 50 each time, approximately 105 properties, would 10 that sound about right? 11 A. I'd have to go back and check his 12 report just to be sure on that. 13 Q. If I represented that was the case, 14 can we go with that, for purposes of today? 15 A. If you want to assume that, I can 16 work with that assumption. 17 Q. It was 105 properties. Do you know, 18 out of the -- were you provided information out of 19 the 105 properties -- did you review the analysis 20 report itself or did you just review what Mr. Horsak 21 had to say about that? 22 A. I've read his report, and so I know 23 that he reported the percentage that were detects for 24 each of the contaminants, and then the percentage</p> |

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| <p style="text-align: right;">Page 57</p> <p>1 that had at least one of them.</p> <p>2 Q. Do you recall what those percentages</p> <p>3 were?</p> <p>4 A. I do not recall those percentages.</p> <p>5 Q. Is it in your report?</p> <p>6 A. I don't think I put those percentages</p> <p>7 in my report.</p> <p>8 Q. It wasn't important to you what the</p> <p>9 percentage was?</p> <p>10 A. No, because for an economic analysis,</p> <p>11 it's -- the standard approach is to look at proximity</p> <p>12 to contamination, and that's what was done in the 58</p> <p>13 studies that Simons and Saginor relied on. That's</p> <p>14 what's done in other types of studies, and so what</p> <p>15 his sampling did was establish the -- that there was</p> <p>16 a proximity effect through the contamination.</p> <p>17 The actual percentages were not</p> <p>18 something that would go into a standard Hedonic</p> <p>19 model.</p> <p>20 Q. So what you're telling me is -- what</p> <p>21 I understand, you're not aware of the percentage of</p> <p>22 properties that tested positive or the percentage</p> <p>23 that were tested negative?</p> <p>24 A. I'm telling you that I just don't</p> | <p style="text-align: right;">Page 59</p> <p>1 one of the properties? Would your report be the</p> <p>2 same?</p> <p>3 A. It probably would not be the same.</p> <p>4 Q. What if it were five detects of 105?</p> <p>5 A. The question is bad because it</p> <p>6 depends on what the detects are and where they are,</p> <p>7 and so that you'd have to have more information, and</p> <p>8 look at them.</p> <p>9 Q. This Saginor report as, Simons and</p> <p>10 Saginor report, isn't that exactly what they did?</p> <p>11 They went in and looked at, was it 80 or so?</p> <p>12 A. Well, the condition here is actually</p> <p>13 worse than what Saginor did, and Simons did, because</p> <p>14 what's being done here is that there is known</p> <p>15 contamination within people's homes. And Simons and</p> <p>16 Saginor, all they're doing is looking at the</p> <p>17 proximity to an admitting source, not where there's</p> <p>18 actual contamination. If they had that information,</p> <p>19 the studies to do it, the percentage diminutions</p> <p>20 would be greater than what I reported in my report.</p> <p>21 Q. We'll go into attic dust in some</p> <p>22 detail a little later. I'm going to turn back to my</p> <p>23 line of question concerning the percentage of</p> <p>24 detects.</p> |
| <p style="text-align: right;">Page 58</p> <p>1 recall those percentages, but I have seen them, and I</p> <p>2 do know that it's more likely than not that there was</p> <p>3 a detect.</p> <p>4 Q. You know it was more likely than not</p> <p>5 that what was a detect?</p> <p>6 A. That they detected one of the two</p> <p>7 contaminants in the dust samples.</p> <p>8 Q. And how many of the 105 samples was</p> <p>9 it more likely than not that they had a detection?</p> <p>10 A. That's not what I said.</p> <p>11 Q. That's what I understood you to say.</p> <p>12 A. No, I didn't say that there was more</p> <p>13 likely than not in an individual one. That's just</p> <p>14 one observation.</p> <p>15 If you'll look across all the data he</p> <p>16 provided, it was more likely than not that the</p> <p>17 samples would have a detect. So more than 50 percent</p> <p>18 of the samples had detects.</p> <p>19 Q. Is that a meaningful number to you,</p> <p>20 that 50 percent number? Does it have to be</p> <p>21 50 percent or more?</p> <p>22 A. No.</p> <p>23 Q. What if we had 105 samples taken and</p> <p>24 there was one detect of toxaphene and dioxathion in</p> | <p style="text-align: right;">Page 60</p> <p>1 You told me earlier that your report</p> <p>2 would not be the same if it was one detect. What</p> <p>3 literature -- what number would it have to get to</p> <p>4 before you could author your report and generate</p> <p>5 opinions that you run, that are provided?</p> <p>6 A. There's no specific number, but what</p> <p>7 I would rely on is the expert like Mr. Horsak, and</p> <p>8 that individual's opinion on the extent of</p> <p>9 contamination, where it was, the spatial</p> <p>10 distribution. There's no magic cutoff number.</p> <p>11 Q. You're able to read his report. I'm</p> <p>12 just curious. In the literature you rely upon, had</p> <p>13 he indicated that there were 20 detects out of 105,</p> <p>14 would you have generated assigned diminution values</p> <p>15 that you did here?</p> <p>16 A. It would have been -- would have</p> <p>17 depended on what his conclusion was in terms of the</p> <p>18 contamination.</p> <p>19 Q. So you're relying totally on</p> <p>20 Mr. Horsak for all of your contamination factual</p> <p>21 data?</p> <p>22 A. For the site, that would be correct.</p> <p>23 That's not my area of expertise, so it's standard to</p> <p>24 rely on other experts' information.</p> |

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| <p>1 Q. And additionally, you would be 2 relying -- you're accepting at face value, without 3 question, the validity of the analytical testing and 4 the results that were reported? 5 A. I have no reason to -- that's outside 6 of my expertise. 7 Q. You haven't gone behind that. You're 8 accepting what you see there is true, without any 9 question about it? 10 A. I'm using that as the truth. 11 Q. So would it be fair to say that your 12 report, to a large extent, is based on the 13 foundation, if you will, of the facts and data and 14 opinions generated by Horsak? 15 A. That's part of the foundation. 16 Q. And if that foundation were to 17 crumble, would you agree that your report would have 18 to be altered? 19 A. If, for some reason, there was a 20 change. For example, more testing was done, and it 21 showed that the detects were a farther range from the 22 2.25 miles then, you know, there would be an 23 adjustment. It wouldn't be big, but there would be 24 an adjustment.</p> | <p>1 A. That's a different question from what 2 you just asked me. 3 Q. Okay. 4 A. So to the current question, I used -- 5 it's documented in the table here, 2.25 miles. 6 Q. And where did you get that number? 7 A. My understanding is that's the 8 distance that is from the fence line to the point 9 that would be the most distant detection. 10 Q. And do you know what that most 11 distant detection was, what compound it was? 12 A. I do not know. 13 Q. It would be one of the two or both? 14 A. One of the two or both. 15 Q. By the two, we're talking about 16 either dioxathion or toxaphene? 17 A. Correct. 18 Q. Had a detection been made, the map 19 that you're looking at is on page, what, of your 20 report? 21 A. What are you looking on? I'm on 22 page 6. 23 Q. Page 6 of your report, and that's a 24 map of the site and its immediate vicinity in</p> |
| Page 62 | Page 64 |
| <p>1 Q. The adjustment that you described 2 would be a larger number of properties? 3 A. Yes. 4 Q. If it turns out that some of the data 5 is analyzed and termed unreliable, and the number of 6 defects was less than Horsak reported, I guess it 7 would be minimized. Would that be fair? 8 A. It could possibly be a smaller 9 distance, if you take the ones that are -- far out 10 and -- but again, it would be a small -- small 11 adjustment. But given that we have an equation to do 12 that, you know, you could do a reprediction. 13 Q. Now, we got off into this line of 14 question, and I think you'll agree with me, I asked 15 you about Horsak and distance, and that's what we've 16 been talking about a little bit; is that correct? 17 Let me ask you another question. 18 What distance -- what was the distance -- can you 19 describe the geographical distance that was pertinent 20 to Mr. Horsak, in his review? 21 A. What review are you talking about? 22 Q. Well, in his report. You mentioned 23 that distance was an important factor in your work. 24 What distance did you utilize?</p> | <p>1 Hattiesburg; is that correct? 2 A. Yes. 3 Q. Had the detection been 20 miles away, 4 would that have been the distance that you would have 5 utilized? 6 A. If that was Mr. Horsak's conclusion, 7 I would have considered a distance that far. I don't 8 have Simons and Saginor behind me, but they show that 9 this carries out a long distance. But the other 10 factor is, is that -- the basic concern is 11 contamination, and it's a log relationship. So it's 12 going up, and as you go out, it tapers off. I mean, 13 it goes out but it wouldn't have much of an effect on 14 the damage calculation. But you'd have to consider 15 that. 16 Q. What distance, that logarithm that 17 you referenced, how far out is it when the bridge 18 does not have -- it loses its effect? What's the 19 distance? 20 A. Well, you know, I don't know where -- 21 there's nothing like a threshold that specifically 22 loses its effect, but it just, you know, as you go 23 out, the curve flattens out, but it doesn't become 24 totally flat.</p> |

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| <p>1 Q. If the -- instead of this two and a 2 half mile radius that we're talking about, is that 3 what it is, two and a half mile radius, 2.25? 4 A. 2.25. 5 Q. If it had been a 500 mile radius and 6 there were detects out to 500 miles, and that was in 7 everything else about Horsak's report was the same, 8 except it showed detections all the way out, 500 9 miles from the site, and he said the same thing about 10 it, would you have accepted that report and used that 11 information, and generated your expert report, based 12 on a 500 mile radius? 13 A. That's a compound question there. 14 Which part do you want me to answer? 15 Q. Well, would you have accepted his 16 report as accurate? 17 A. I have -- you know, I have -- that's 18 not my area of professional expertise so I don't have 19 any reason to judge it. 20 Q. So you would? 21 A. Yeah. 22 Q. You would accept that and would have 23 generated a report similar to the one you've done 24 here for a 2.25 mile radius or a 500 mile radius,</p> | <p>1 be an article you're relying on? 2 A. Yes, sir. 3 Q. One of the important ones? 4 A. Yes. I don't have a calculator here 5 to take the analog of it, but for the distance, the 6 maximum is 3.22. That's the log of distance. I'd 7 have to take the analog of it to get the... 8 Q. What would be some of the minimum 9 distance that the authors determined to be in play at 10 other sites? 11 A. So that's a log variable, and I'd 12 also have to take the analog but I can tell you that 13 it's less than a mile. 14 Q. So it would be less than a mile on 15 the inside to -- what did you say? 3... 16 A. 3.22, but that's the log of miles. 17 Let's see if they say anything here. Okay, so the 18 natural log. It went from 25 miles to zero. 19 Q. So there's some that are 25 miles? 20 A. Yes. 21 Q. So if -- would you have been 22 comfortable, had Horsak found detections of these 23 components 25 miles away from the site, to have 24 utilized that distance factor in connection with your</p> |
| Page 66 | Page 68 |
| <p>1 because you're buying into -- 2 A. No, I don't think I would have gone 3 500 miles, because 500 miles goes beyond the data 4 that the Simons and Saginor model is based on. 5 Q. Where's the outer boundary of the 6 data that they have generated? 7 A. I'd have to go back and look at that 8 report, and I don't have that right here in front of 9 me right now. 10 Q. If I handed it to you, could you tell 11 me? 12 A. See what they say, yeah. 13 Q. I'm handing you, and I'm not going to 14 mark it as an exhibit, a paper which is titled A 15 Mega-Analysis of the Effect of Environmental 16 Contamination and Positive Amenities on Residential 17 Real Estate Values, Robert Simons and Jesse D. 18 Saginor. 19 A. Just to be factual, it's a 20 meta-analysis, not a mega-analysis. 21 Q. I misspoke. 22 A. So this is not going to be an 23 exhibit, I'm looking at. 24 Q. No, sir. But you recognize that to</p> | <p>1 preparation of your report? 2 A. I think I've answered that question 3 multiple times now. I'm not an expert in 4 Mr. Horsak's field, so I take the information that he 5 has and used it. That's the standard practice, to 6 rely on other experts' information. We do that in 7 our published research in peer review journals as 8 well. Would I have gone out that far? The answer is 9 no because this is a case for Hattiesburg, and I 10 would have stopped at Hattiesburg city limits. 11 Q. Okay. I understand that. Now, you 12 mentioned the Herrin report, so someone who is 13 reading this, maybe doesn't know what that is. That 14 is yet another expert retained by the city, I believe 15 with an accounting background, and she generated a 16 report that you relied upon, and you told me that it 17 was the number of residences or parcels of property; 18 is that correct? 19 A. That's correct. 20 Q. And I believe -- I'll either ask you 21 to tell me or I'll try to move through this. It was 22 2000 and some single-family residences, and 23 approximately 5,000 commercial or vacant properties 24 within the 2.25 mile radius, or did I mistake that?</p> |

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| <p>1 A. Yeah. So, for the residential it's 2 2,724 within the 2.25 mile radius. 3 Q. Thank you. And the remaining 4 properties was what? 5 A. I don't have that number right here 6 for the commercial. 7 Q. As I recall -- we can get it but I 8 believe it was approximately 5,000 commercial vacant 9 properties, for a total of almost 8,000 pieces of 10 property. Does that sound about right? 11 A. That sounds about right. 12 Q. Now, do I understand, from your 13 report, that, based upon testing of 105 properties, 14 and you've told me you're not exactly sure how many 15 of them tested positive, but you thought it was more 16 than 50. So let's say 70, for sake of discussion, 70 17 tested positive. Based upon those 70 detections that 18 were found, 8,000 properties have been -- will at 19 some point in the future, you predict, will be 20 diminished in value. 21 A. Is that a question or statement? 22 Q. I'm asking. Is that true? 23 A. The question is? 24 Q. Your report, you assert that some</p> | <p>1 terms of the number of properties, that's not what I 2 did in my report. That's what Ms. Herrin did in her 3 report, so you kind of combined all three reports in 4 your question, and it's the sequence of them working 5 together. 6 Q. You referenced Ms. Herrin as being 7 one of the factual issues for your report and I'm not 8 trying to misstate anything that she put in there. 9 A. No, but we started with asking about 10 the number but then you changed it to what I did in 11 my report, which carried over into what actually was 12 done in Ms. Herrin's report. 13 Q. Let's go back through this. This is 14 important, and I don't mean to confuse you. I'm not 15 trying to. 16 A. I'm just trying to be clear on what 17 my report says. 18 Q. I understand, and I appreciate that. 19 It was probably clear to everybody in this room but 20 me, so let me try to catch up. 21 You will agree with me that the 22 bottom line, when you look at the Herrin report and 23 look at your report and these ad valorem issues, that 24 some 8,000 properties within the 2.25 radius of the</p> |
| Page 70 | Page 72 |
| <p>1 8,000 properties, at some point in the future, you 2 predict, will sustain diminution in value of anywhere 3 from 10 to 15 percent, due solely to the positive 4 detection reports of approximately some 70 properties 5 within this 2.25 mile radius. 6 A. So there's several parts to that. So 7 the first part is, is that I have to rely on 8 Mr. Horsak that in his field, that 105 is a 9 sufficient sample to do that. So I'm going back -- 10 Q. You don't know personally what that 11 is? You're just buying into his program? 12 A. I accept his professional expertise 13 in that area. 14 The next part is, is what I predict 15 is the diminution of residential of 15 percent, and 16 what we'll call in a general name, commercial, 17 because it includes a number of different things, and 18 we'll use commercial right now for my work, of 19 10 percent. 20 I am saying that properties within 21 the 2.25 are going to experience that property price 22 diminution to be used for the basis of calculating 23 the losses of tax revenues to Hattiesburg. 24 To go to the next step, though, in</p> | <p>1 site, you predict will be adversely affected from a 2 property standpoint, property diminution standpoint? 3 A. I say that they will be adversely 4 affected. Let me just clarify that for part of what 5 we've been talking about. It's not necessary that 6 the contamination is on every property. When these 7 studies have been done, if you'll look at Simons and 8 Saginor, I believe it might even be in their first 9 paragraph. They say it's based on proximity. So 10 it's within the proximity we'll experience it. 11 If they had gone, which I said 12 before, gone the next step and been able to include 13 properties that had actual contamination in them, 14 that would have been another factor, would have 15 increased the percentage diminution. 16 So what I'm saying is that because of 17 proximity, that's the standard approach in my area of 18 expertise, that I predict the property value 19 diminutions. But these are a lower bound of what 20 will be experienced. It's a lower bound, ultimately, 21 when you get to Ms. Herrin's debt of what the tax 22 losses are to Hattiesburg. 23 Q. I appreciate that. Let me kind of go 24 back to where we need to head. This 8,000 pieces of</p> |

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| <p style="text-align: right;">Page 73</p> <p>1 property are adversely affected, in your view, in 2 your prediction, are based upon, from a contamination 3 standpoint analysis, are based upon detections, 4 positive detections, according to the city's 5 evidence, of roughly 60 or 70 properties? 6 A. It's based on a sample of the number 7 of detects, so that there is approximate 8 contamination to other property, diminished property 9 values. 10 MR. YARBOROUGH: Will you please 11 reread my question, and I think it's a yes 12 or no and you can explain. 13 (The record was read by the reporter 14 as requested.) 15 THE WITNESS: So if you could just 16 help me out, that's kind of a long run-on 17 question. Could you reask it again, please. 18 BY MR. YARBOROUGH: 19 Q. Out of the 8,000 properties that are 20 in play -- do we have 8,000 properties in play, 21 roughly? 22 A. Roughly. 23 Q. You'll agree to that? 24 A. Yes.</p> | <p style="text-align: right;">Page 75</p> <p>1 would increase the diminution that I predict beyond 2 the 15 and 10 percent. 3 Q. I appreciate that speech, Dr. Boyle, 4 but I really want to get an answer to my question, 5 and I'm not arguing with you. 6 In terms of hard, analytical testing 7 data, we'll use your number of 68 properties you 8 testified positive, according to Horsak; is that 9 correct? 10 A. I'm not saying I remember the number 11 of 68. 68 percent, not 68. But I don't remember 12 that for sure. 13 Q. If I represented to you there were 14 105 samples taken -- let's call it 70 -- 75. Let's 15 say all of them tested positive for purposes of my 16 question. 105. And based upon 105 in terms of 17 analytical science, the property values have 18 diminished, predicted in the future, these 8,000 19 properties in this 2.25 mile radius? 20 A. Yes. 21 Q. Thank you. The Simons paper that you 22 mentioned just a minute ago, did they -- and that was 23 a meta-analysis? 24 A. Correct.</p> |
| <p style="text-align: right;">Page 74</p> <p>1 Q. They're in play based upon detections 2 of these two chemicals in roughly 60 or 70 of the 3 properties of the 8,000? 4 A. They're in play on a percentage, and 5 I don't remember exactly, but 70 percent seems like 6 it's pretty close. I remember a number of 68 7 percent, but I'm not sure of that. 8 Q. Let's use 68. We have 68 detections 9 on properties, and that affects the value of 8,000 10 properties within the 2.25 mile radius? 11 A. And my answer is yes, and you said I 12 could explain. My explanation is, is that I'm 13 relying on the science of Mr. Horsak that that is 14 appropriate sampling, and then I'm also relying on 15 the standard practice in our field that proximity to 16 contamination diminishes property values. It doesn't 17 have to necessarily be on your property to diminish 18 property values. 19 And then the Simons and Saginor 20 looked at 58 studies and found that proximity to 21 contamination is a significant predictor. 22 But then I came back to your point 23 about the ones with the actual contamination. If 24 that information was able to be factored in then that</p> | <p style="text-align: right;">Page 76</p> <p>1 Q. Not mega, meta-analysis. Did they 2 determine sites where there had not been any 3 reduction in property values? 4 A. It's not that they determined. They 5 did a review of the literature to identify studies 6 that had looked at -- had actual effects on property 7 values, and used them as the data in their analysis. 8 That's what a meta-analysis is. In that, they 9 included studies that -- it's not that they didn't 10 have any, but they did not have a significant -- 11 Q. Detrimental effect? 12 A. Significant effect. Statistically 13 significant effect. 14 Q. Over and above that paper, you are 15 generally aware that there are any number of 16 contaminated sites around the country that, for 17 whatever reason, had not resulted in detrimental -- 18 detriment of nearby property values? 19 A. What I'm aware of is that there are 20 some that there is not a statistically significant 21 effect. 22 Q. It varies from site to site? 23 A. It varies from site to site. Most of 24 the studies that have been done have found effects</p> |

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| <p style="text-align: right;">Page 77</p> <p>1 but you have to be careful in how you interpret 2 statistics. 3 You're basically testing a null 4 hypothesis that there's no effect. If you find a 5 significant effect, you reject that null hypothesis 6 of no effect. If you don't, the appropriate way of 7 the statistic is to say that you cannot reject it. 8 It's not that you reject it. So it could be that 9 there's no effect or it could be that there is just 10 not enough information at the time or something to do 11 it. So you don't know for sure that there is not 12 effect. There may be or there may not be. 13 Q. Thank you. Now, in many instances, 14 isn't it true that there may be an initial detrimental 15 effect, but with the passage of time, there's a 16 rebound of property values? 17 A. Yes. 18 Q. That happens on occasion? 19 A. Yes. 20 Q. And there are any number of factors 21 that might result to you, one of which might be 22 publicity about remediation of the site and 23 corrective action and things of that nature? 24 A. That there has been remediation or</p> | <p style="text-align: right;">Page 79</p> <p>1 don't agree with that, but assuming for the sake of 2 my question that it is correct, you've assigned 3 relatively modest diminution in value to these 4 properties, have you not? 5 A. I have assigned relatively modest 6 compared to other things that's been in the 7 literature. 8 Q. And that's based upon the formula in 9 the Saginor paper? 10 A. I used the best information in the 11 economics literature, tailored it to the Hattiesburg 12 area, so it's my best estimate. So I believe that 13 those highest numbers were not the best estimate. 14 This was the best estimate. But I do say that this 15 is still a conservative number. 16 Q. And that's based largely upon the 17 contamination information that you were provided by 18 Horsak? 19 A. Yes. 20 Q. Have you ever reviewed any portion of 21 the file on the Hercules site, maintained by either 22 the EPA or the Mississippi Department of 23 Environmental Quality? 24 A. I don't know what you mean by the</p> |
| <p style="text-align: right;">Page 78</p> <p>1 that the site has been cleaned up, can reduce it or 2 remove it through time. 3 Q. What about statements from government 4 officials about risk? And by government, I'm talking 5 about public health service, EPA, DEQ, that the site 6 poses no risk to adjacent residents. Does that have 7 an impact on property values? And I know it's a 8 broad question. 9 A. Yeah, not necessarily, because I 10 think people know that thresholds of risk change 11 through time and new information, so I think people 12 react to whether there is contamination, and the 13 economic literature would suggest that knowledge of 14 contamination can reduce it. So I think that's 15 information, but I don't think that necessarily 16 removes it. 17 I think the key thing is what you 18 raised before, that I think the literature has shown. 19 When it has been shown that a site has been cleaned 20 up, the effect can go away, but not statements of 21 what the threshold of risk is. 22 Q. You'll agree with me, won't you, that 23 assuming your predictive analysis is correct, and 24 certainly, representatives of Ashland and Hercules</p> | <p style="text-align: right;">Page 80</p> <p>1 file, but when I was doing some of the work and 2 looking around, I found PDFs of state reports that 3 were online, that I scanned down through various 4 information. 5 I remember one that had information 6 on capping of the landfill sites on the site, and 7 where buildings had been taken down, and whether 8 they're vegetated for the inspection. You know, if 9 you're talking about a complete file, no, but I found 10 information that I looked at. 11 Q. Do you know whether there are any 12 information, newspaper articles, reports, what have 13 you, going years back regarding potential off-site 14 contamination caused by the Hercules site, emanating 15 from the Hercules site? 16 A. What do you mean by years back? 17 Q. Well, prior to this attic dust 18 information you provided, are you aware of any 19 studies, allegations, articles where there were 20 claims or contentions that there was off-site 21 contamination? 22 A. I'm not absolutely sure, thinking 23 back in terms of -- I mean, you know, I looked at 24 some, but I can't answer that affirmatively or</p> |

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| <p style="text-align: right;">Page 81</p> <p>1 negatively right now of the articles I went through. 2 They may have been. I just don't remember. 3 Q. I want to go back to talking about 4 the 8,000 properties. And you made the statement a 5 couple of times that in your view, the prediction 6 that you're making, properties that are not -- has 7 not been shown to have been contaminated are likewise 8 detrimentally valued? 9 A. Experience of property value 10 diminutions. 11 Q. They have. And so we know that not 12 all of the properties were tested for attic dust, 13 these 105 properties. Not all of them were 14 detections, were they? 15 A. Not all of them were detections, but 16 I also understood from Mr. Horsak's report, that just 17 because he didn't get a detection didn't mean that 18 there was not the two chemicals present that a dust 19 sample some other place in the property might have 20 detected. 21 Q. That's pure speculation, though, 22 isn't it? 23 A. Well, that was his professional 24 opinion. I mean, that's common sense, that if you</p> | <p style="text-align: right;">Page 83</p> <p>1 beyond would have a higher, some of the ones -- I 2 mean a lower. Some of the ones closer would have a 3 higher just on that. This is kind of the best 4 overall estimate to use for predicting what the 5 diminution in taxes would be. 6 Q. I want to ask -- 7 A. I guess I want to just step back. I 8 didn't do the specific application in terms of 9 applying them to properties. That's in Ms. Herrin's 10 report, not mine, so I just want to keep this clear 11 on where we're talking about this. 12 Q. I understand. She's talking about 13 from an accounting, a numbers crunching analysis. 14 I'm talking about the science. I'm talking about the 15 contamination here. Let's just move on. 16 I want to turn to the home -- the 17 properties that were either tested and have no 18 detects, and the remaining 7,900 properties that were 19 not tested. Are we tuned in? 20 A. Continue. 21 Q. In fact, I'll even make it easier. 22 Let's talk about the 7,900 that were not tested. 23 You'll agree with me, roughly speaking, there were 24 that rough number within the radius?</p> |
| <p style="text-align: right;">Page 82</p> <p>1 did sampling in another place, you might find 2 information. 3 Q. Am I correct that this diminution in 4 value, be it 10 percent, 15 percent, would be the 5 same for a property that had a detection versus the 6 same that had no detection, was tested and had no 7 detection? 8 A. No, I've already said that one that 9 had detection, it would be higher, the property value 10 diminution. 11 Q. That's not in your report, is it, in 12 terms of the percentage of diminution? 13 A. Right, because I don't have any 14 information with the existing studies to do that. 15 That's my professional opinion. 16 Q. But you've basically assigned either 17 this 10 or 15 percent regardless of whether there was 18 a detection of property or regardless of whether the 19 property was even tested within the 2.25 miles? 20 A. I have not applied -- I've given that 21 prediction of that's what the best estimate of what 22 the -- would be, the diminution would be. But there 23 could be some that could be lower. For example, for 24 the 2.25, I divided that by two, so some of the ones</p> | <p style="text-align: right;">Page 84</p> <p>1 A. With the numbers we're working with, 2 yes. 3 Q. And you testified earlier that those 4 properties are likewise detrimentally valued as a 5 result of the contamination present in the area; is 6 that right? 7 A. Yes. 8 Q. Now, that type of detriment or that 9 devaluation would be a stigma devaluation, would it 10 not? 11 A. Not in economic terms. To an 12 economist, when you look at our literature, a stigma 13 occurs after the contamination has been removed so 14 that there's no risk left at all, but properties 15 continue to have a diminution because people don't 16 move on immediately from them. And, you know, it 17 could be that they just don't accept it or it could 18 be that during the period of contamination, 19 properties weren't maintained so that there's other 20 things that take a while for it to adjust. That's 21 what stigma is, in the economics literature. 22 Q. Well -- 23 A. Let me finish. In these properties, 24 the other 5,000, they are responding to a risk that's</p> |

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| <p style="text-align: right;">Page 85</p> <p>1 been established by the science of the contamination 2 there, so that's not stigma. Stigma is when there's 3 not a risk that they're exposed to. It's been 4 removed and it's continued to be an effect. This is 5 a risk to people of properties and where they live 6 and where they work, and that's a risk, that's not a 7 stigma. 8 Q. And the risk being a possibility that 9 their property is contaminated? 10 A. The risk is the property is 11 contaminated. 12 Q. A risk that there is a possibility 13 that their particular property is contaminated? 14 A. Yes. 15 Q. Just the mere possibility? 16 A. Well, it's not -- if you're talking 17 about it in terms of technical terms, the mere 18 possibility is a very vague term. When you do 19 sampling like Mr. Horsak does, it shows that there's 20 contamination. 21 Also, his report talks about how the 22 contamination is mobile and can be moving around. 23 It's not the mere possibility. There's science out 24 there that establishes that contamination is there,</p> | <p style="text-align: right;">Page 87</p> <p>1 Q. Dr. Boyle, I realize you're not an 2 attorney, and I don't mean this as a legal question 3 but as just a factual one. 4 Are you aware of, in your reading and 5 just interest in this area, of any -- and you've 6 studied litigation in the context of contaminated 7 sites in these studies that you report. Are you 8 aware of any instances where a property owner, who 9 has not demonstrated actual contamination to his 10 property, is able to recover for property diminution 11 in a court of law? 12 MR. RADNEY: Object to the form. 13 Object to the extent it calls for a legal 14 conclusion. 15 THE WITNESS: I can't give you any 16 answer to that as a lawyer. And I'll also 17 say that, you know, my work as an expert 18 doesn't carry through to know everything 19 that goes on. For example, in the case that 20 I testified in Vermont, I don't know 21 everything that followed on after the 22 decision was challenged and went to the 23 Supreme Court and everything. I just don't 24 know.</p> |
| <p style="text-align: right;">Page 86</p> <p>1 and that that contamination is mobile and can move. 2 So it's a real risk. It's just not a mere 3 possibility. 4 Q. Well, if I bought one of these 5 properties in this 8,000 that hadn't been tested, 6 it's just my opinion, in terms of my feelings about 7 the value of my home and risk, that's just -- I don't 8 know if my -- none of these property owners in that 9 category know that their properties have been 10 contaminated, do they? 11 A. I can't say whether any do or don't, 12 but it's -- the value of a property is -- the fair 13 market value of a property is the sale price between 14 willing buyers to willing sellers. And if willing 15 buyers know that there is a chemical contamination 16 that is a health risk in a property, that's going to 17 affect whether they even want to buy it or the price 18 that they would pay. That's what the property value 19 studies have demonstrated over and over again. And 20 so -- and that puts the property owner not just 21 sitting there, oh, I suppose, but making that 22 decision, and realizing that they have to make a 23 concession in their fair market value, when they sell 24 the property.</p> | <p style="text-align: right;">Page 88</p> <p>1 BY MR. YARBOROUGH: 2 Q. You don't know of one either way, is 3 what you're telling me? 4 A. That's not an area of my expertise, 5 again, that I know that information. 6 Q. Okay. 7 A. I could use a break for a water, 8 please. 9 MR. YARBOROUGH: Sure. 10 THE VIDEOGRAPHER: Off the record at 11 10:59 a.m. 12 (A recess ensued.) 13 THE VIDEOGRAPHER: On the record at 14 11:12 a.m. 15 BY MR. YARBOROUGH: 16 Q. Okay, Dr. Boyle, you testified 17 earlier by the break, we were talking about stigma 18 versus real risk. 19 A. Yes. 20 Q. Is the real risk, as you understand 21 it, from the contamination that information has been 22 provided you that resulted in these predicted 23 property diminution values, stand from the findings 24 in the presence of the attic dust in the homes that</p> |

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| <p style="text-align: right;">Page 89</p> <p>1 were tested and had positive detections?</p> <p>2 MR. RADNEY: Object to the form.</p> <p>3 BY MR. YARBOROUGH:</p> <p>4 Q. Is that the risk, contamination of</p> <p>5 risk?</p> <p>6 A. Could you clarify the question for</p> <p>7 me, please.</p> <p>8 Q. You talked about risk that someone</p> <p>9 would have with respect to the sale of their house</p> <p>10 because of the contamination, and the -- what do you</p> <p>11 classify as a contamination here?</p> <p>12 A. So the contamination is what I'm</p> <p>13 relying on in Mr. Horsak's report. And Mr. Horsak</p> <p>14 talks about the identification of the contamination</p> <p>15 and the attic dust which is mobile and can move</p> <p>16 around, and that I believe he says that, you know,</p> <p>17 that it's evidence that the contamination is coming</p> <p>18 from the Hercules site.</p> <p>19 So it's basically -- if you think</p> <p>20 about a stool, there's three legs to it, the source</p> <p>21 at the Hercules site, the property-specific, and</p> <p>22 residences where there's been detect, and the fact</p> <p>23 that the dust with the contaminants is mobile.</p> <p>24 Q. You mentioned an area that I haven't</p> | <p style="text-align: right;">Page 91</p> <p>1 is that a health risk as a result of these</p> <p>2 contaminants that are present in the attic dust of</p> <p>3 these properties?</p> <p>4 A. It's a risk that there are</p> <p>5 contaminants in the properties.</p> <p>6 Q. Have you ever brought to this</p> <p>7 retention addressed situation where the contaminant</p> <p>8 was present, and only in the attic dust of the</p> <p>9 surrounding properties, as opposed to ground water or</p> <p>10 soil or anything of that nature?</p> <p>11 A. Can I have that just read back to me,</p> <p>12 please.</p> <p>13 Q. That was a clumsy question. Maybe I</p> <p>14 can start over. This is an attic dust case; is that</p> <p>15 right, in terms of contamination?</p> <p>16 A. I don't know if I'd call it that.</p> <p>17 I'd say attic dust is one of the pieces of impotence.</p> <p>18 Q. Well it's the principal, isn't it?</p> <p>19 A. I don't know all the dimensions. I</p> <p>20 don't know all the experts in this so I can't answer</p> <p>21 that.</p> <p>22 Q. In terms of what you're addressing,</p> <p>23 it's the principal contaminant. That's what you talk</p> <p>24 about in your report, isn't it?</p> |
| <p style="text-align: right;">Page 90</p> <p>1 gone into. Let me do it real briefly. You're</p> <p>2 following Horsak's view that every detection of</p> <p>3 either of these two chemicals, the site was the</p> <p>4 source of that. That's what you're relying on?</p> <p>5 A. I don't want to testify that that is</p> <p>6 Mr. Horsak's opinion because I don't know. But what</p> <p>7 I do believe I understand --</p> <p>8 Q. What is your position on it?</p> <p>9 A. It's not my position, but what I</p> <p>10 understand from his report is that the evidence is</p> <p>11 that the contaminants come from the Hercules site.</p> <p>12 Q. And you're accepting that in</p> <p>13 generating the report that you generated?</p> <p>14 A. I'm accepting Mr. Horsak's opinion,</p> <p>15 yes.</p> <p>16 Q. And not accepting the possibility</p> <p>17 that there are other sources for these contaminants</p> <p>18 in the environment?</p> <p>19 A. I think, in Mr. Horsak's report, I'd</p> <p>20 have to go back and check again, but as I recall,</p> <p>21 he -- I think that he allowed that there's potential</p> <p>22 for other sources but that the evidence is strong</p> <p>23 here, but I'm not quite as strong on that.</p> <p>24 Q. And the risk that you talked about,</p> | <p style="text-align: right;">Page 92</p> <p>1 A. Well, it's the contaminants in the</p> <p>2 dust.</p> <p>3 Q. That's what I meant by attic dust</p> <p>4 case for your purposes. I'm not trying to hold you</p> <p>5 to what all those experts said. It's not my</p> <p>6 intention of doing that.</p> <p>7 Have you ever addressed, prior to</p> <p>8 this retention, a situation where the alleged</p> <p>9 contamination in adjoining properties was present in</p> <p>10 attic dust?</p> <p>11 A. I have not testified in a case where</p> <p>12 there has been identified contamination to attic</p> <p>13 dust, that I know of.</p> <p>14 Q. Have you ever read any literature,</p> <p>15 either referenced, for example, in the Saginor report</p> <p>16 or any other articles, where that was a situation,</p> <p>17 the constituents in attic dust was a contamination at</p> <p>18 issue that adversely affected property values?</p> <p>19 A. I haven't read but I have had</p> <p>20 firsthand experience, when we purchased a home, that</p> <p>21 we had an asbestos test done, and I paid less for</p> <p>22 that property because of the asbestos present, and</p> <p>23 had the asbestos removal done.</p> <p>24 Q. You're not aware of any studies or</p> |

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| <p style="text-align: right;">Page 93</p> <p>1 literature that addressed that issue, of all that you 2 produced?</p> <p>3 A. I want to be clear what the question 4 is again.</p> <p>5 Q. Talking about attic dust 6 contamination, as Horsak found in some of the 7 properties adjacent to the Hattiesburg site, have you 8 had prior experience, any reading, any literature, 9 any retentions in that particular environmental 10 setting?</p> <p>11 A. I have not had any that I can recall, 12 but in the types of analysis that economists do, 13 generally the specific type of contamination is not 14 as relevant as the proximity to the contaminant.</p> <p>15 Q. Are you familiar with the term 16 pathway, in terms of risk and contamination?</p> <p>17 A. I am familiar with pathway.</p> <p>18 Q. What is pathway?</p> <p>19 A. Let me just take a drink. 20 Pathway is, as I understand it, it's 21 not an area that I'm expert in, but as I understand 22 it, it's the way that exposure to the contaminant 23 occurs.</p> <p>24 Q. That's the way it makes its way, if</p> | <p style="text-align: right;">Page 95</p> <p>1 (Exhibit No. 4 was marked for 2 identification.)</p> <p>3 BY MR. YARBOROUGH:</p> <p>4 Q. I realize you've not seen this 5 before. Take a minute and look at that. And I'll 6 represent to you that this is a letter I pulled off 7 the internet, doing some research about attic dust 8 contamination, and it's there for anyone to get. I 9 cant' vouch for it, but I think that's where it came 10 from.</p> <p>11 A. Do you want me to read it?</p> <p>12 Q. Yes. I'll tell you what, in order to 13 save time, this has -- this is a report dealing with 14 a different site. It has nothing to do with 15 Hattiesburg. Okay? I was specifically interested in 16 you taking a look at the second paragraph.</p> <p>17 A. I'd like to read the whole thing, if 18 I could.</p> <p>19 Q. Sure. 20 (Brief pause.)</p> <p>21 THE WITNESS: Okay, I've read it.</p> <p>22 BY MR. YARBOROUGH:</p> <p>23 Q. Thank you. Do you see the 24 position -- the relevance that the ATSDR assigns</p> |
| <p style="text-align: right;">Page 94</p> <p>1 we're talking about human exposure, to the human. 2 We've got air, ingestion, injection, dermal. That 3 would be the four ways. Would you agree with that?</p> <p>4 A. Yes.</p> <p>5 Q. Did I get those right? Right. 6 Have you done any research about 7 pathways which may not be present in contaminants 8 present in attic dust, in residences and commercial 9 property?</p> <p>10 A. That's not my area of expertise.</p> <p>11 Q. So your answer will be no?</p> <p>12 A. No.</p> <p>13 Q. Are you familiar with the Agency For 14 Toxic Substances and Disease Registry out of Atlanta, 15 Georgia?</p> <p>16 A. I have heard of that before.</p> <p>17 Q. They're an arm of the Department of 18 Health and Human Services. Are you aware of the 19 position that the ATSDR has in, at least some cases, 20 taken with respect to significance of attic dust 21 contamination?</p> <p>22 A. I am not.</p> <p>23 MR. YARBOROUGH: I want to mark as 24 Exhibit 4, a letter I'll hand you.</p> | <p style="text-align: right;">Page 96</p> <p>1 contaminated attic dust in this particular instance?</p> <p>2 A. And you're asking me...</p> <p>3 Q. Well, it states, does it not, that 4 the ATSDR does not evaluate attic dust for cumulative 5 airborne or incidental ingestion exposures. And that 6 would be the two pathways, would they not, you would 7 either breathe the dust or eat it; is that correct?</p> <p>8 A. Yes.</p> <p>9 Q. Since this is not an area where 10 occupants spend significant time unless it is used as 11 a living space. Did I read that correctly?</p> <p>12 A. Yes.</p> <p>13 Q. The data cannot be used to establish 14 a completed human exposure pathway or to determine 15 health risk, and cannot help to evaluate cash risk in 16 the household or community. Did I read that 17 correctly?</p> <p>18 A. Right. I think what they're saying, 19 it's not that there's no risk, it's just not 20 complete.</p> <p>21 If you go down to the bottom, they 22 almost give contradictory here, because the last 23 paragraph says: We also notice that levels of lead 24 detected in dust samples in one of the homes is</p> |

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| <p style="text-align: right;">Page 97</p> <p>1 26,600 milligrams per kilogram. This concentration 2 of lead in a dust sample may be an indication of a 3 lead hazard within this home. The most common source 4 of indoor lead is associated with lead-based paint. 5 This home should be evaluated for lead hazards 6 particularly if young children are present. 7 It seems to me they're saying that 8 the dust samples do give an indication of a 9 contamination, but it's not a complete pathway. 10 Q. Do you know whether the dust they're 11 talking about was taken inside the home as opposed in 12 the attic? 13 A. I don't, but they're talking about 14 attic dust samples here. 15 Q. Does it say attic dust when they're 16 talking about lead samples? 17 A. No. 18 Q. That's all I have for you on that 19 particular document. 20 Have you ever conducted any study or 21 done any research with respect to the impact 22 specifically of the presence of toxaphene and/or 23 dioxathion on property values? 24 A. I have not done studies specific to</p> | <p style="text-align: right;">Page 99</p> <p>1 Horsak here? 2 A. Yes. That's standard practice. 3 Q. You state in your opinions that -- 4 you indicate in your opinions that they're given to a 5 reasonable degree of economic certainty. Can you 6 tell me what that means? 7 A. So what I'm saying when my opinions 8 are to a reasonable degree of economic certainty, 9 that they're established procedures used in the 10 economics field that have been published in 11 peer-reviewed journals that people have looked at, 12 error rates associated with them. 13 Q. Are you of the opinion in this 14 case -- I'm going to use the acronym PVD, property 15 value diminution. Is PVD a certain outcome for every 16 property within the 2.5 mile radius? 17 A. The property value diminution, a 18 certain outcome. 19 Q. In your opinion, is property value 20 diminution a certain outcome for every property 21 within the two and a half mile radius that we've been 22 talking about here today? 23 A. I would say that it's possible that 24 there might be a property that would not have a</p> |
| <p style="text-align: right;">Page 98</p> <p>1 those contaminants. 2 Q. I want to return to your report and 3 ask you about some of your opinions. You've got it 4 there in front of you. And I'll try not to cover 5 anything that I've already asked. I may be 6 backtracking just a little bit. 7 You told me earlier that it's not 8 your opinion that contamination always causes 9 property value diminution, that you know of instances 10 where that has not occurred? 11 A. I said that I know of instances where 12 they have not been able to find a statistically 13 significant effect, and I've also said that I know of 14 studies that have shown that after cleanup, that the 15 effect has gone away. 16 Q. How do you define contamination? 17 A. The way I define contamination is 18 based on people who are scientific experts in that 19 area, and so, you know, in this case, it's the 20 presence of dioxathion and toxaphene in the dust 21 samples. All the different ones that I've worked 22 with, we work with some type of natural or biological 23 scientist that provides us with that information. 24 Q. And you rely on that just as you did</p> | <p style="text-align: right;">Page 100</p> <p>1 diminution -- I can't think of a reason right now, 2 but the statistical analysis would say that we would 3 expect every property to have one. 4 Q. Are you aware of any science or 5 situations in which contamination resulted in less 6 than the expected or predicted property value 7 diminution? 8 A. I'd just like that one read back, 9 please. 10 Q. Are you aware of any science or 11 situations in which contamination resulted in less 12 than the expected or predicted property value 13 diminution? 14 For example, we wake up five years 15 from now and go out and do a market study around the 16 site, and it does not square with your views. 17 There's no diminution. Are you aware if that has 18 occurred in any of your reading or studies? 19 A. I don't know of any studies that 20 have -- I want to think about this one. Can I have 21 that question read back. 22 Q. Are you aware. Well, do you want 23 me -- do you want me to give you my question? 24 A. I don't care.</p> |

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| <p style="text-align: right;">Page 101</p> <p>1 Q. Are you aware of any science or 2 situation in which contamination resulted in less 3 than the expected or predicted property value 4 diminution? And then I went on to say, for example, 5 if we would wake up five years from now and went out 6 and did a market study of these properties that we've 7 been talking about, and the market dictated that 8 there had not been this diminution that you had 9 predicted, do you know of any situations like that, 10 that are further down the road, that you've read 11 about?</p> <p>12 A. So let me explain to you why I was a 13 little bit challenged by this question, because the 14 Hedonic property studies that are at the basis of it 15 are not predictions. They are actual studies where 16 they've been able to have properties in the sample 17 that have and have not experienced diminution. So 18 those are real diminutions that have been 19 experienced.</p> <p>20 In terms of doing the transfer and 21 prediction to another site, there have been studies 22 that have looked at predicting how well the Hedonic 23 models predict. But it's been enveloped in all the 24 different methods that have been used in making those</p> | <p style="text-align: right;">Page 103</p> <p>1 that every single household in the affected area 2 receives the information at the same time, then you'd 3 be expecting it to basically be happening more 4 instantaneously --</p> <p>5 Q. Like flipping a light switch. It 6 would be worth \$100 the day before in the light 7 switch, and it's worth \$90?</p> <p>8 A. Yeah, I mean, that's basically -- to 9 give you an example --</p> <p>10 Q. I'm just trying to get an 11 understanding.</p> <p>12 A. What's going on right now is they're 13 talking about putting Mountain Valley Pipeline 14 through this area, and to move natural gas, and as 15 soon as that answered that that affected the sale 16 prices of properties in that corridor.</p> <p>17 Q. So what you're telling me is 18 essentially is the dissemination of this information 19 within the -- to the owners of the properties at 20 issue, that determines when this drop occurs?</p> <p>21 A. Yeah, when and how that information 22 is disseminated.</p> <p>23 Q. Is there any way that, other than the 24 passage of time, that we would know if your property</p> |
| <p style="text-align: right;">Page 102</p> <p>1 transfers. And that -- I'd have to go back and 2 check, but I did the analysis of that with one of my 3 graduate students, and the error is in the range of 4 25 to 30 percent.</p> <p>5 Q. So what you're saying, sometimes a 6 quarter to a portion of a third are instances where 7 there have been a prediction of property diminution, 8 and they did not in fact occur in the real world?</p> <p>9 A. No, not that did not occur but could 10 be higher or lower.</p> <p>11 Q. Okay. Now, you assigned these 12 percentage, drop, percentage diminution in values to 13 the two classes of property that we talked about 14 earlier. Do you expect all of these properties to 15 experience say a percentage drop in value 16 simultaneously?</p> <p>17 A. If the market has adjusted, then they 18 all should experience it. Now, whether it's sooner 19 for some than others, that depends on how the 20 information on the contamination is dispersed.</p> <p>21 If people find out about it earlier, 22 later it affects how sales are going, then that could 23 be. If you take the case of some of the stuff where 24 a public health official has gone out and made sure</p> | <p style="text-align: right;">Page 104</p> <p>1 value diminution predictions are accurate?</p> <p>2 A. So in terms of -- for economics, 3 basically, what you're asking me is are they valid? 4 Validity assessment. And there are three or more 5 different ways of looking at validity.</p> <p>6 The one validity you've been talking 7 to me about is criterion validity, passage of time, 8 and then observing whether the average effect is 9 15 percent or 10 percent. That's rarely ever done, 10 and hardly ever do it. But other ones that are done 11 are content validity and convergent validity.</p> <p>12 Content validity is when you're 13 following established practices in your profession 14 for doing it. And so from that perspective, I think 15 that we would find that the predictions that I made 16 are valid.</p> <p>17 The other one is when you compare 18 them to other ones, and that's where the prediction 19 error types of studies I've done. So I think that in 20 terms of my field, there would be two that you could 21 look at for validity, without having to wait for the 22 passage of time.</p> <p>23 Q. But you're never for sure until the 24 time passes and there's -- a measured market</p> |

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| <p style="text-align: right;">Page 105</p> <p>1 diminution can be obtained? It's all just opinion 2 before then, isn't it? 3 A. No, it's not opinion. Opinion is not 4 based on any actual evidence, somebody just goes out 5 and says it. This is based on actual information, on 6 actual sales, actual diminution of properties with 7 it, and so it is a scientific prediction of what the 8 effect would be. 9 Q. So you're sitting here guaranteeing, 10 without knowing what's going to happen in the future, 11 these PVDs are going to come about? Is that what 12 you're telling me? 13 A. What I'm telling you is that it is my 14 best estimate of what they will be as this 15 information becomes available. 16 Q. So it's an estimate, not a guarantee. 17 It's your protection? 18 A. It's my prediction. 19 Q. We talked about predictions earlier. 20 Are you of the opinion that every 21 property -- maybe I asked you this earlier -- within 22 the two and a half mile radius will experience 23 property value diminution? I think you mentioned 24 maybe one that wouldn't.</p> | <p style="text-align: right;">Page 107</p> <p>1 the contamination, I would expect that that 2 diminution would go away in the future, but I don't 3 have any information at this point in time, to know 4 whether it's possible or when the complete cleanup 5 might occur. 6 Q. Are you aware of any sites, any 7 studies that you've read about, where the property 8 diminution reversed itself or bounced back to a 9 healthy state, even in the absence of a remediation 10 or cleanup? 11 A. Not right now. The ones I'm aware of 12 are ones where there has been cleanup. 13 Q. You're just not aware of any? 14 A. Just not aware of any. 15 Q. Okay. You touched on something we 16 hadn't really gone into much, and I want to go into 17 it now, and that deals with the anticipated property 18 tax loss revenue to the City of Hattiesburg. 19 And you stated in your report, and 20 I'm going to quote from page 2: These predictions, 21 ellipses, are appropriate to compute the anticipated 22 loss in property tax revenue to the City of 23 Hattiesburg. 24 Did I read that correctly?</p> |
| <p style="text-align: right;">Page 106</p> <p>1 A. I said there's a possibility there 2 might be one. I can't think of reasons why it would 3 be. 4 Q. Could it be two? 5 A. You know, I mean, you could find an 6 odd example. I can't think of a reason right now why 7 there would be. Basically, the research indicates 8 that you would expect all properties to have 9 diminished property values. 10 Q. How can you be certain of that? 11 A. Because what has been done is looking 12 at studies that have been done, that have found 13 significant property value effects. And one of the 14 things is if you look at the distribution of errors, 15 the distribution is not including zero as a likely 16 outcome. 17 Q. So what you're telling me, with the 18 exception of maybe one odd man out, odd property out, 19 you're of the opinion that every property within this 20 two and a half mile radius is going to experience a 21 property value diminution? 22 A. I am. 23 Q. Now, is that permanent? 24 A. If and when they're able to clean up</p> | <p style="text-align: right;">Page 108</p> <p>1 A. Where is that on page 2 -- I found it 2 in the middle of the page. Yes. 3 Q. What's the historical relationship 4 between assessed values and market values, as 5 reflected by our sale prices for residential and 6 commercial property in Hattiesburg? 7 A. I cannot comment on that. That's 8 within Ms. Herrin's report. My experience, 9 generally, with assessed values is that they are 10 updated periodically, using actual sale prices to 11 update them. But how different municipalities slice 12 and dice them, that varies from community to 13 community, and that's in Ms. Herrin's report. 14 Q. Let's talk about the assessed values. 15 I assume this is an area that you're somewhat 16 familiar with. There are situations where a property 17 owner receives a tax bill, and for whatever reasons 18 feel like his property has been overvalued for 19 purposes of ad valorem taxation. That happens 20 community to community, does it not? 21 A. Yes. 22 Q. And the appropriate remedy to do that 23 would be for the property owner to approach the 24 taxing authority, the tax assessor, collector,</p> |

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| <p style="text-align: right;">Page 109</p> <p>1 whoever it might be, and state his case, so to speak; 2 correct? 3 A. Yes. 4 Q. And in most instances, will you agree 5 with me that the taxing authorities are reticent to 6 just accept the word of the property owner that they 7 are overtaxed or their properties are overvalued for 8 taxation purposes? There has to be some proof? 9 A. Some evidence. 10 Q. And one element of proof would be 11 comparable sales that could be shown, like on a 12 square foot price in adjoining areas of the property? 13 Would that be one? 14 A. I don't know what different tax 15 assessors -- how they operate. I know from personal 16 experience, and I've challenged them, and that they 17 never accepted comparable sales, that they would only 18 do it if you could show that there was something 19 technically incorrect, you know, you have the square 20 footage wrong, or something like that. 21 Q. What about an appraisal? What if 22 someone had a formal appraisal and presented it to 23 the tax assessor? Do you think that would be 24 something that would be considered by the taxing</p> | <p style="text-align: right;">Page 111</p> <p>1 A. A direct correlation doesn't have any 2 meaning to me from a professional perspective. 3 Correlation is a statistical term and that there is a 4 correlation. 5 Q. Why do you recommend applying the PVD 6 percentage you estimated at 15.4, the 10 percent, to 7 Class I and Class II property, respectively, rather 8 than using partial level data to determine land use, 9 and applying the percentages to residential and 10 commercial property, respectively, regardless of 11 class status? 12 A. I don't know how to answer that 13 question with all the parts to it. I'm sorry. 14 Q. You can't answer that? 15 A. I don't quite understand what you're 16 asking. 17 Q. Would it help you if I reread it 18 again? 19 A. Let's try. 20 Q. Do you recommend applying the PVD 21 percentage you estimated to Class I and Class II -- 22 why do you recommend applying the PVD percentages you 23 estimated to Class I and Class II property, 24 respectively, rather than using partial level data to</p> |
| <p style="text-align: right;">Page 110</p> <p>1 authority? 2 A. Once again, I can't say. I know when 3 I've challenged, they have not accepted an appraisal 4 because the appraisal was done -- when they do the 5 reassessment it's a mass appraisal across the whole 6 community. But different ones could have different 7 rules and I can't comment on what individual ones, 8 but that's not my experience. 9 Q. I believe you stated in your report, 10 I think maybe I'm still on page 2, that you assume a 11 direct correlation between a predicted change in 12 market values, which would be sale price, and a 13 predicted change in assessed values. Am I correct 14 about that? 15 A. Where are you reading from? 16 Q. Do you assume that? Is there a 17 direct correlation between a predicted change in 18 market values and a predicted change in assessed 19 values? 20 A. I assume that assessed values change 21 when they're reassessed, and they reflect any changes 22 in market conditions. So I do assume that there is a 23 correlation between the two. 24 Q. A direct correlation?</p> | <p style="text-align: right;">Page 112</p> <p>1 determine land use, and applying the percentages to 2 residential and commercial property, respectively, 3 regardless of class status? 4 A. So, when you -- 5 Q. Does that question mean anything to 6 you? 7 A. Well, I mean, you talk about applying 8 the 15 percent and then 10 percent but then you say 9 regardless of class status, so that implies just one 10 percentage for all properties? Is that what you're 11 saying? 12 Q. I'm just asking my question, if you 13 can answer it. If you don't understand just tell me. 14 A. I don't understand it. 15 Q. We've -- correct me if I'm wrong. I 16 want to ask another question. We've earlier 17 discussed the geographic limit on how far your 18 predictions would emanate, and I think you said 3.2 19 will be about the furthest you've seen any studies 20 out there, 3.2 miles? 21 A. That was the log of it. I think, 22 what was it, 25? 23 Q. 25 miles, that's correct. 24 A. That was the extent of the -- what</p> |

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| <p style="text-align: right;">Page 113</p> <p>1 Simons and Saginor, so there may be some other ones 2 out there but I would be surprised anything much 3 beyond that. 4 Q. You stated, on page 16 of your 5 report: The predictions could be used for properties 6 beyond 2.5 miles from the Hercules Manufacturing site 7 if the contamination were detected in more distant 8 properties. 9 Have we discussed that earlier? 10 A. Yes. 11 Q. And did I ask you if there was a 12 geographic limit on how far these predictions are 13 accurate? 14 A. You didn't ask me on how far they 15 were accurate. I told you that I wouldn't -- but to 16 answer that, they'd be accurate up and to what Simons 17 and Saginor had observed for other studies. Given 18 it's a Hattiesburg case, I would not go beyond 19 Hattiesburg with any limit. I mean, they're not 20 losing the tax base of another community, so I would 21 stop -- 22 Q. So that wouldn't be relevant to your 23 work here today? 24 A. Right.</p> | <p style="text-align: right;">Page 115</p> <p>1 them we're talking about here is the attic dust 2 contamination, would be one example. 3 Q. On page 6 of your report, we touched 4 on this a little bit, talking about the market 5 adjusting to contamination information. Buyers and 6 sellers would not be agreeing the transactions would 7 pull information on the extent of current 8 contamination and potential for future contamination. 9 A. I see where you're reading. 10 Q. You do? 11 A. Yes. 12 Q. And maybe you mentioned this earlier. 13 What exactly has to occur for the market to adjust to 14 contamination information? 15 A. That the information is out there, so 16 that buyers and sellers have information on the 17 presence of contamination, and what they would need 18 to do to understand if it was in a property that they 19 were buying or selling. 20 Q. And that would indicate to you that 21 the market has knowledge, and the prices reflect 22 contamination information at that juncture? 23 A. Yes. 24 Q. In the Simons paper, and maybe we</p> |
| <p style="text-align: right;">Page 114</p> <p>1 Q. I want to turn to market data and 2 market knowledge. We touched on some of that. How 3 do you define market data? Do you have a definition 4 for market data? 5 A. So, I don't know -- market data is 6 pretty broad term, you know. I mean, basically what 7 we would say -- 8 Q. In the context of property valuation. 9 A. -- for a model like where an 10 economist would estimate, it would be sale prices 11 between willing buyers and willing sellers, and the 12 characteristics of those properties that you would 13 use in the model to explain variation in sale prices. 14 Q. What are some examples of 15 property-specific factors that affect values of 16 property? 17 A. They're generally thought of in 18 groups or categories in them. So there's lot 19 characteristics, there are house characteristics. So 20 a lot example is acreage of the property. House 21 characteristic is square footage. 22 There are community characteristics. 23 An example would be quality of schools. And then 24 there are environmental characteristics, and one of</p> | <p style="text-align: right;">Page 116</p> <p>1 won't need to look at it. I'm going to read 2 something from page 72. 3 A. I'd like to see the paper to get an 4 answer. 5 Q. Let me just read this and see if you 6 agree with it. Contamination affects property values 7 through impact on the real estate bundle of rights. 8 Do you want to -- 9 A. If I could see it. 10 Q. I'm just going to ask you about that 11 question. Are you familiar with the term real estate 12 bundle of rights? 13 A. Yes, and I remember that sentence in 14 the paper. I'd still like to see it in context. 15 Q. What is the real estate bundle of 16 rights? 17 A. It's a bundle -- 18 Q. As you understand it. 19 A. -- of rights that an individual can 20 enjoy and transact when they purchase a property. 21 Q. Would you read -- I'll turn it to you 22 and read it out loud. 23 A. Contamination affects property values 24 through impact on the real estate bundle of rights.</p> |

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| <p style="text-align: right;">Page 117</p> <p>1 These rights include the right to possess, enjoy, 2 control and dispose of real estate property. 3 Q. That is what you refer to as a bundle 4 of rights? 5 A. That's how they have, and I would not 6 disagree with that. 7 Q. As of the present time, and that's -- 8 you mentioned that was a right to use and enjoy and 9 not be interfered with the full utilization of your 10 property; is that correct? 11 A. Yeah. 12 Q. As of the present time, court rights 13 have been adversely affected for these properties 14 within the two and a half mile radius. 15 MR. RADNEY: Object to the form. 16 Calls for a legal conclusion. 17 BY MR. YARBOROUGH: 18 Q. Are you aware of any loss of bundle 19 of rights, loss of use, loss of enjoyment, 20 interference? 21 A. You're asking me to testify outside 22 of what my expertise as an economist is. 23 Q. I'm just asking you if you're aware. 24 It's not an opinion.</p> | <p style="text-align: right;">Page 119</p> <p>1 yes or no? You say that doesn't mean anything to 2 you, but are you aware of any? 3 A. I can say that I do not know that's 4 not the area that I would be specifically offering a 5 professional opinion on. 6 Q. So you're not aware of any? 7 A. I can't say that I'm aware right now. 8 Q. Okay. Is the -- is the impact on 9 these properties the same for rental property versus 10 owned property, the PVD? 11 A. So, the diminution that I gave is for 12 owned property. But it differentiates whether it's 13 owner-occupied or rented. So the 15 percent is for 14 owner-occupied, whereas the 10 percent is for owner, 15 not occupied, where they rent it. 16 Q. Okay. What about vacant versus 17 occupied? 18 A. So -- what do you mean by vacant? 19 Q. Empty house, nobody lives there. 20 A. So whether it's owner-occupied or not 21 owner-occupied, the diminution is the same. 22 Q. Do you know whether any of the 8,000 23 plus properties within a two and a half mile radius, 24 have leaking underground storage tanks?</p> |
| <p style="text-align: right;">Page 118</p> <p>1 A. My area of expertise is to predicting 2 the diminution. When you look at economics -- let me 3 give you an example -- 4 Q. I'd rather you answer my question. 5 If you can't, you can't. Are you aware of any loss 6 of these bundle of rights in any of these properties 7 we've been talking about, at the present time? 8 MR. RADNEY: Object to the form. 9 Calls for a legal conclusion. 10 THE WITNESS: I just want to explain 11 that to -- 12 BY MR. YARBOROUGH: 13 Q. I'd rather you answer my question and 14 then you can explain it. Yes or no? 15 A. Ask the question again. 16 Q. Are you aware of any interference in 17 these bundle of rights, the right to use, enjoy, free 18 from interference of any kind, at the present time, 19 of any of these 8,000 properties we've been talking 20 about? 21 A. What I'm aware of is that there is 22 contamination. As an economist, we don't go to that 23 level. For example -- 24 Q. That's fine, but will you give me a</p> | <p style="text-align: right;">Page 120</p> <p>1 A. I do not. 2 Q. What about septic tank problems? 3 A. I do not. 4 Q. Are they near high voltage power 5 lines? 6 A. I do not. 7 Q. Are they near railroad tracks or 8 major thoroughfares? 9 A. It depends on whether you say close. 10 I mean, I know that those elements are in the area, 11 but close is a relative term. 12 Q. Are there any landfills within the 13 two and a half mile area? 14 A. I understand that there's some 15 landfills on the Hercules site. 16 Q. Other than that. Off-site. 17 A. I don't remember any when I was 18 looking around, but there may be. 19 Q. Are there any feeding operations? 20 A. Not that I know of. 21 Q. Do you know if any of these 22 properties have hazardous waste of any kind? 23 A. They may or may not. 24 Q. What about issues with groundwater?</p> |

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| Page 121 | Page 123 |
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| <p>1 A. There may be groundwater.</p> <p>2 Q. Are there properties with</p> <p>3 construction defects, foundation issues or soil</p> <p>4 stability issues?</p> <p>5 A. I don't know. None of these would</p> <p>6 affect my prediction, but we could go through them</p> <p>7 all.</p> <p>8 Q. Whether it was a floodplain or prone</p> <p>9 to flooding wouldn't matter to you? You're not</p> <p>10 interested in how many of the properties might be in</p> <p>11 a floodplain, or prone to flooding?</p> <p>12 A. I'm not predicting the full value of</p> <p>13 the property. If you're predicting the full value,</p> <p>14 you would bring these into considerations. I'm only</p> <p>15 looking at the diminution.</p> <p>16 If you look at the Simons and Saginor</p> <p>17 equation, I understand from reading that there had</p> <p>18 been some possible groundwater contamination but I</p> <p>19 didn't turn that on, because I couldn't find -- there</p> <p>20 wasn't any evidence. They've gone beyond the site</p> <p>21 that I know of at this time. I didn't turn on the</p> <p>22 case to find animal feedings. Some of these things,</p> <p>23 if they were present, are ways that they could be</p> <p>24 included, but I did not add them into the property</p> | <p>1 not what we were trying to do. We're trying to get</p> <p>2 the best estimate of the overall loss and tax</p> <p>3 revenues, not making individual predictions for each</p> <p>4 one.</p> <p>5 The claim, as I understand it, is not</p> <p>6 for the homeowners, but for the community of</p> <p>7 Hattiesburg, and that's the type of prediction I'm</p> <p>8 trying to make here.</p> <p>9 Q. I guess, since you've told me that</p> <p>10 property-specific conditions don't affect your PVD</p> <p>11 assessment, I take it, then, you're not aware of</p> <p>12 whether a property owner has been limited at the</p> <p>13 current or in the future time, of potential use of</p> <p>14 their property?</p> <p>15 A. Is there more to that?</p> <p>16 Q. No, that's it. You're not aware of</p> <p>17 any impact, any property owner being limited to the</p> <p>18 present or future use of their property, are you?</p> <p>19 A. I don't have any specific, any</p> <p>20 individual specific --</p> <p>21 Q. You're not property-specific</p> <p>22 interested?</p> <p>23 A. Right. I'm looking at the aggregate</p> <p>24 effect.</p> |
| Page 122 | Page 124 |
| <p>1 value diminution.</p> <p>2 Q. Because you're just not familiar with</p> <p>3 the area down there, are you? And you've not been</p> <p>4 down there, you don't know what's present and not</p> <p>5 present?</p> <p>6 A. These issues are purely irrelevant</p> <p>7 for my analysis.</p> <p>8 Q. This will lead to mine final question</p> <p>9 on this topic. So what you're saying is that</p> <p>10 property-specific conditions don't affect the PVD</p> <p>11 diminution that you've assigned?</p> <p>12 A. Right, because I am not looking at</p> <p>13 the specific property. I'm just looking at the</p> <p>14 overall effect that would happen on the market to be</p> <p>15 used for the aggregate loss and tax revenue.</p> <p>16 Just to step back to where we were</p> <p>17 talking earlier, in the Halliburton case we were</p> <p>18 making predictions for individual properties, so we</p> <p>19 needed a value for those properties that took in</p> <p>20 local conditions. And there, we worked with a local</p> <p>21 appraiser who went in and took those considerations</p> <p>22 into effect, and did the analysis. And, you know, if</p> <p>23 we were doing for individual properties, I would have</p> <p>24 worked with somebody locally. I'm sure that that is</p> | <p>1 Q. Is your PVD theory based on distance</p> <p>2 from the source site, being the Hercules site, as</p> <p>3 maintained by the city, or on actual contamination?</p> <p>4 MR. RADNEY: Object to the form.</p> <p>5 THE WITNESS: Can I have that again?</p> <p>6 BY MR. YARBOROUGH:</p> <p>7 Q. Is your PVD theory based on distance</p> <p>8 from the source site or on actual contamination?</p> <p>9 A. What do you mean by actual</p> <p>10 contamination?</p> <p>11 Q. Verified by analytical testing.</p> <p>12 A. So I just want -- I'm just trying to</p> <p>13 think through -- I'd like it read back again or can</p> <p>14 you read it to me.</p> <p>15 Q. Let me give you an example. The</p> <p>16 farthest -- correct me if I'm wrong. The detection</p> <p>17 farthest removed from the site, what was it?</p> <p>18 2.5 miles?</p> <p>19 A. Yes.</p> <p>20 Q. That was one the farthest out. Does</p> <p>21 the property diminution that you assign the house</p> <p>22 right next door to it result from it being present,</p> <p>23 next door to the house where the detection was found</p> <p>24 or is it measured due to the geographical source,</p> |

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| <p style="text-align: right;">Page 125</p> <p>1 back to the site?</p> <p>2 A. So I'm more comfortable with talking</p> <p>3 about the formula than the theory.</p> <p>4 Q. Does the formula take into account --</p> <p>5 A. The formula is the distance from the</p> <p>6 contamination site. It does not have an additional</p> <p>7 variable about whether contamination was detected on</p> <p>8 individual properties.</p> <p>9 Q. That's fine. You answered my</p> <p>10 question.</p> <p>11 A. I'd just like a bathroom break.</p> <p>12 MR. YARBOROUGH: Sure.</p> <p>13 THE VIDEOGRAPHER: Off the record at</p> <p>14 12:03 p.m.</p> <p>15 (A recess ensued.)</p> <p>16 THE VIDEOGRAPHER: On the record at</p> <p>17 12:09 p.m.</p> <p>18 BY MR. YARBOROUGH:</p> <p>19 Q. Dr. Boyle, you testified, made</p> <p>20 several comments recently about your role was not to</p> <p>21 really address the site-specific diminution for an</p> <p>22 individual property owner, but rather your concern</p> <p>23 with the loss and tax revenue to the city; is that</p> <p>24 correct?</p> | <p style="text-align: right;">Page 127</p> <p>1 future?</p> <p>2 A. They're predictions based on actual</p> <p>3 sales and established scientific procedures, not just</p> <p>4 my opinion.</p> <p>5 MR. YARBOROUGH: Can we go off the</p> <p>6 record for a second, please.</p> <p>7 THE VIDEOGRAPHER: Off the record at</p> <p>8 12:11 p.m.</p> <p>9 (Brief pause.)</p> <p>10 THE VIDEOGRAPHER: On the record at</p> <p>11 12:12 p.m.</p> <p>12 BY MR. YARBOROUGH:</p> <p>13 Q. I want to turn to the Simons and</p> <p>14 Saginer meta-analysis and ask you a few questions</p> <p>15 about this report. Are you familiar with -- being a</p> <p>16 professor with a Ph.D., you're familiar -- and</p> <p>17 author, are you familiar with the definition of peer</p> <p>18 review?</p> <p>19 A. I am.</p> <p>20 Q. Why is that important?</p> <p>21 A. Peer review is a way of making sure</p> <p>22 that the study has followed scientifically</p> <p>23 established procedures.</p> <p>24 Q. And had been passed on by others in</p> |
| <p style="text-align: right;">Page 126</p> <p>1 A. Of what the diminution would be</p> <p>2 overall on property values for that calculation.</p> <p>3 Q. And they would have a loss or damage</p> <p>4 based upon those calculations?</p> <p>5 A. Of my calculations and Ms. Herrin's</p> <p>6 calculations.</p> <p>7 Q. Now, as of the present time the city</p> <p>8 has not incurred any damages like that, have they?</p> <p>9 A. You know, I don't know whether there</p> <p>10 have been some damages that have been occurring from</p> <p>11 the presence of contaminants on the site.</p> <p>12 Q. You're not aware of any?</p> <p>13 A. I'm not aware of any, but they could</p> <p>14 possibly be there.</p> <p>15 Q. But certainly, this massive</p> <p>16 reassessment that you predict may result in the</p> <p>17 future has not occurred; is that correct? You'd know</p> <p>18 if that happened, wouldn't you?</p> <p>19 A. This change has not occurred at this</p> <p>20 time, as far as I know, with the information just</p> <p>21 becoming available, yes.</p> <p>22 Q. So these opinions that you've</p> <p>23 rendered, as we stated earlier, are predictions of</p> <p>24 what you believe will occur at some point in the</p> | <p style="text-align: right;">Page 128</p> <p>1 the field?</p> <p>2 A. Yes.</p> <p>3 Q. Passing muster, so to speak?</p> <p>4 A. Yes.</p> <p>5 Q. How many of the -- I believe it was</p> <p>6 58 studies in the Simons model, did you review</p> <p>7 personally?</p> <p>8 A. I have reviewed some, but not --</p> <p>9 well, let's be specific. I do not believe I was a</p> <p>10 peer reviewer in the publication of any of those</p> <p>11 studies.</p> <p>12 Q. Do you know what decisions were made</p> <p>13 by the authors regarding standardizing, including,</p> <p>14 excluding or otherwise manipulating the data? Just</p> <p>15 off the top of your head, do you know?</p> <p>16 A. Well, I'd have to go through. They</p> <p>17 were very careful in their documentation, everything</p> <p>18 that they did in the process here, and it has the</p> <p>19 standard procedures for reporting. But, I mean,</p> <p>20 there are many things that they did, from going at</p> <p>21 the beginning, where they -- you know, they looked</p> <p>22 broadly, ended up with 230 studies, came down to some</p> <p>23 of the checks that they did statistically, so there's</p> <p>24 a lot of different things they did and reported, and</p> |

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| <p style="text-align: right;">Page 129</p> <p>1 that's in the article.</p> <p>2 Q. And a lot of different decision parts</p> <p>3 such as time, geography, property type that effect</p> <p>4 the outcome of the studies?</p> <p>5 A. I'm not sure exactly what you're</p> <p>6 asking me there.</p> <p>7 Q. Do you know what selection process</p> <p>8 Simons utilized to select the 58 studies from the</p> <p>9 over 100 articles considered?</p> <p>10 A. What I understand is that they looked</p> <p>11 at studies that talked about contamination of</p> <p>12 property values, and took the ones that actually</p> <p>13 provided measures of property value diminutions.</p> <p>14 There might be ones in the literature that talk about</p> <p>15 whether you could get lending or other types of</p> <p>16 things when you do an initial search, might come up,</p> <p>17 but would not be appropriate for inclusion here.</p> <p>18 Q. Were any of the studies that were</p> <p>19 excluded, did they affect the ultimate meta-analysis</p> <p>20 equation?</p> <p>21 A. The studies that were excluded,</p> <p>22 there's nothing in here that says whether they did or</p> <p>23 did not. My understanding was, is that the ones that</p> <p>24 were excluded would not have been the same type of</p> | <p style="text-align: right;">Page 131</p> <p>1 an answer on that.</p> <p>2 Q. Do you know how many observations</p> <p>3 they selected from each study?</p> <p>4 A. They don't give a table with the</p> <p>5 number for each study, but they do do analyses of</p> <p>6 looking at whether the effect that different numbers</p> <p>7 of observations from a study would affect the</p> <p>8 results.</p> <p>9 Q. If they remove outliers and they</p> <p>10 affect the reliability of the model, don't they?</p> <p>11 A. I don't think there's any evidence</p> <p>12 that they affect the reliability of the model.</p> <p>13 Actually, removing outliers is one of the procedures</p> <p>14 for having what you might consider a more reliable</p> <p>15 model.</p> <p>16 Q. So you -- that's why you selected</p> <p>17 this outlier 3 model as one of your papers you rely</p> <p>18 upon?</p> <p>19 A. Yes.</p> <p>20 Q. On page 79 of their report , I'll ask</p> <p>21 you about it. There's a quote. Of the 228</p> <p>22 observations --</p> <p>23 A. I'm not with you yet.</p> <p>24 Q. I'm sorry.</p> |
| <p style="text-align: right;">Page 130</p> <p>1 studies here, so there wouldn't have been a way to</p> <p>2 include them. But they did do extensive analysis of</p> <p>3 the studies within here, of whether they would have</p> <p>4 an effect through the outlier analysis. But they</p> <p>5 also looked at how many studies would have to be</p> <p>6 done -- how many additional studies would have to</p> <p>7 come in to change the result. I can't remember</p> <p>8 exactly where that is in here, but I believe it was</p> <p>9 in the order of about 30. So they did do what would</p> <p>10 be established robustness checks on the influence of</p> <p>11 studies.</p> <p>12 Q. Can you tell me how they selected the</p> <p>13 specific variables to use in the meta-analysis</p> <p>14 equation, such as location, distance, contamination</p> <p>15 time, litigation?</p> <p>16 A. I cannot tell you how they selected</p> <p>17 specific variables, but they are variables that make</p> <p>18 sense, from looking at the studies in the field.</p> <p>19 Q. Do you know what process they used to</p> <p>20 code each of the variables for each of the</p> <p>21 observations?</p> <p>22 A. I can't remember what they talked</p> <p>23 about with that on coding. I'd have to go back and</p> <p>24 read the paper through carefully in order to give you</p> | <p style="text-align: right;">Page 132</p> <p>1 A. Okay, I see it.</p> <p>2 Q. Of the 228 observations, 34 were</p> <p>3 associated with zero property value loss.</p> <p>4 What does that mean?</p> <p>5 A. That would mean that studies were not</p> <p>6 able to detect a statistically significant effect.</p> <p>7 Q. How does it affect the models'</p> <p>8 estimate of PVD?</p> <p>9 A. Those studies are included in the</p> <p>10 analysis. So those studies are considered when they</p> <p>11 estimate the model.</p> <p>12 Q. Are all 34 of those observations</p> <p>13 included in the outlier 3 model?</p> <p>14 A. I believe they are. Let me just go</p> <p>15 to that and read what they say.</p> <p>16 (Brief pause.)</p> <p>17 THE WITNESS: They say that the</p> <p>18 obviously unimpaired property values in</p> <p>19 excess of 500,000, were removed. That</p> <p>20 would not be for any of the studies that I</p> <p>21 used in there, because I'm focusing on the</p> <p>22 Hedonics. But that would be the case study</p> <p>23 ones. So there were some that were removed</p> <p>24 from the equation, not all of them. But I'm</p> |

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| <p style="text-align: right;">Page 133</p> <p>1 not relying on the case study or survey or 2 other ones. I'm only relying on their 3 results for the Hedonic property value 4 model. 5 BY MR. YARBOROUGH: 6 Q. So the 34 observations that were 7 associated with zero property value loss, they don't 8 indicate to you that diminution cannot be assumed? 9 They're meaningless to you in terms of your opinion; 10 is that correct? 11 A. No, they're not meaningless. They're 12 included in the equation as they should have been, 13 and being considered in the analysis. 14 Q. Does their meta-analysis produce 15 different results? By different results I mean 16 estimates of PVD for properties that are actually 17 contaminated versus those that are not. 18 A. They do not have a variable that 19 distinguishes that in their equation. Their study -- 20 this is the first sentence in their study. It says: 21 This research addresses how proximity to source 22 influences environmental contamination effects on 23 residential property values. 24 The reason that they do that is</p> | <p style="text-align: right;">Page 135</p> <p>1 diminution. So that's another factor that makes the 2 15 and 10 percent conservative. 3 Q. Is the degree of contamination a 4 factor that's relative to property value? 5 A. It may or may not be a factor, but 6 again, that would be another variable that would be 7 in the equation. And if it did for each increment, 8 it would increase it. It would not be a decrease in 9 the percentage diminution. 10 Q. Is there a model, Saginor model, 11 capable of producing a specific instance of PVD, or 12 is it, by design, formulated to produce equal or 13 equivalent diminutions for all properties? 14 A. Well, it produces values that can 15 be -- it's a formulaic process that can give values, 16 depending on what the conditions are. So, you know, 17 given the variables in the equation, there are 18 different things that changed. You could get 19 different ones for different properties. 20 But it's really the same procedure, 21 the kind of formulaic procedure that an appraiser 22 uses in terms of when they do their appraisal and 23 they have three common ones, you make adjustments for 24 the square footage or the acreage of a property.</p> |
| <p style="text-align: right;">Page 134</p> <p>1 that's the standard way that these are looked at in 2 the economics and the real estate literature, is 3 proximity. 4 Q. So I assume, then, their results 5 don't vary by degree of contamination? 6 A. They do not. But then again, 7 basically, I think what the economics literature has 8 found is that people do not want to see 9 contamination. 10 Q. Answer me this. Are the presence 11 and/or the degree of contamination factors that are 12 relevant to property value? 13 A. So the presence is, and I have said 14 more than once today that I would expect, if they did 15 have it in their equation, that it would have been an 16 additional factor that would have increased the price 17 diminution. 18 One of the reasons that is not in is, 19 when you're estimating these models, in order to 20 include a variable like that, you need to have a 21 measure of the contamination for each property to 22 include it in the underlying Hedonic model. That 23 information is generally not available. But if it 24 was, I think we would be seeing a larger property</p> | <p style="text-align: right;">Page 136</p> <p>1 This would be one that doesn't necessarily, the 2 percentage doesn't vary from property to property but 3 it would be a formulaic one for a community with this 4 type of contamination would be. The magnitude of the 5 effect changes by the value of the house. 6 Q. What is the model you use to produce 7 the same PVD value for every property, two classes of 8 property? 9 A. Because they're all in the -- for 10 each of the classes, because they are in the same 11 community, with the same community characteristics. 12 Q. Since you mentioned community, is 13 that estimate unique to the Hercules site? Is it 14 unique to Hattiesburg? 15 A. It's unique to those characteristics 16 that we put into it. So would it change with another 17 community? Yes. I mean, it changed with what I did 18 in Duncan, Oklahoma. It was a much larger property 19 value diminution predicted there. 20 Q. So it's unique to this particular 21 site, this particular situation? 22 A. Yes, in Hattiesburg. 23 Q. Would the model produce the same 24 outcome for every other site in the south for which</p> |

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| <p style="text-align: right;">Page 137</p> <p>1 you coded the variables in the same way?</p> <p>2 A. Yes, it would.</p> <p>3 Q. You'd have no variables which would</p> <p>4 differ, I take it is what you're telling me?</p> <p>5 MR. RADNEY: Object to the form.</p> <p>6 THE WITNESS: I think I misspoke on</p> <p>7 that one because unemployment would change,</p> <p>8 interest rates would change, and so the sell</p> <p>9 variable would be the same. I just reacted</p> <p>10 to the sell variable, but the prediction</p> <p>11 would change.</p> <p>12 BY MR. YARBOROUGH:</p> <p>13 Q. Does your model have an error rate?</p> <p>14 A. There is --</p> <p>15 Q. Or a margin of error?</p> <p>16 A. The margin of error that I would put</p> <p>17 on it is based on what -- kind of a convergent</p> <p>18 validity type of test that I told you about before,</p> <p>19 and that would be in the range of 25 to 30 percent.</p> <p>20 Q. Are you aware of specific site or</p> <p>21 situation in which the Simon and Saginor</p> <p>22 meta-analysis accurately predicted PVD?</p> <p>23 A. I don't know of any cases. We've</p> <p>24 been through that. In the cases, I don't know what</p> | <p style="text-align: right;">Page 139</p> <p>1 Q. And the economy as well?</p> <p>2 A. And the economy.</p> <p>3 Q. Has mortgage rates changed?</p> <p>4 A. Mortgage rates have changed and we've</p> <p>5 taken account of that in the model.</p> <p>6 Q. Has unemployment changed?</p> <p>7 A. Yes, and we've taken account of that</p> <p>8 in the model.</p> <p>9 Q. Are you aware of any relevant studies</p> <p>10 that have been published since they completed their</p> <p>11 research in the early 2000s, any studies which</p> <p>12 addressed their paper?</p> <p>13 A. I don't know of any studies that have</p> <p>14 commented on their paper.</p> <p>15 Q. Would you agree that at some point in</p> <p>16 time their model may become dated and no longer</p> <p>17 relevant for predicting PVD?</p> <p>18 A. That's possible. That addresses a</p> <p>19 different issue. You know, in economics we refer to</p> <p>20 that as reliability. If you do something at one</p> <p>21 point in time can you replicate it in a second -- at</p> <p>22 a later point in time, and they have been -- these</p> <p>23 types of things have been very robust and so I would</p> <p>24 think that within the time frame that we're talking</p> |
| <p style="text-align: right;">Page 138</p> <p>1 the outcome is afterwards.</p> <p>2 Q. What's the date of their article?</p> <p>3 A. 2006.</p> <p>4 Q. So in the nine years since the</p> <p>5 publication of that article, we just -- at least</p> <p>6 you're not aware of whether the model has been proven</p> <p>7 accurate in a given situation? You can't quote me to</p> <p>8 a particular site or area?</p> <p>9 A. And I've answered this before.</p> <p>10 You're asking for the criteria and validity, and I</p> <p>11 told you I just don't know where the cases go</p> <p>12 afterwards, and what happens. But this would stand</p> <p>13 up to the other two types of validity that I</p> <p>14 discussed earlier.</p> <p>15 Q. Fair enough. Do you know what the</p> <p>16 most recent sales data analyzed in one of the 58</p> <p>17 studies that underlie their model?</p> <p>18 A. I don't have that information in</p> <p>19 front of me, but it would be pre 2006, because those</p> <p>20 all had to be in place for them to do their study.</p> <p>21 Q. Has the real estate market changed</p> <p>22 since then?</p> <p>23 A. There have been changes in real</p> <p>24 estate markets.</p> | <p style="text-align: right;">Page 140</p> <p>1 about, that these percentage diminutions should be</p> <p>2 quite stable.</p> <p>3 Q. Let me turn to, if I could, ask you</p> <p>4 about -- maybe it will be the last paper. Yes, it</p> <p>5 is.</p> <p>6 A. Are we done with this one?</p> <p>7 Q. Yes, sir, we are. I'm not sure I</p> <p>8 even have a copy of this with me.</p> <p>9 A. This is not an exhibit.</p> <p>10 Q. I'll keep this with me, but you're</p> <p>11 familiar with the Ihlanfeldt and Taylor study?</p> <p>12 A. Ihlanfeldt.</p> <p>13 Q. This addressed -- what was that</p> <p>14 study?</p> <p>15 A. That was a study -- can I have the</p> <p>16 study to look at?</p> <p>17 Q. I don't have it in front of me. Do</p> <p>18 you know what geography was studied?</p> <p>19 A. It was --</p> <p>20 Q. Was it Atlanta?</p> <p>21 A. Atlanta area, Fulton County area.</p> <p>22 Q. What basically did they study?</p> <p>23 A. They looked at property value effects</p> <p>24 from proximity to contaminated properties, and I</p> |

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| <p style="text-align: right;">Page 141</p> <p>1 believe that they had apartments, retail, commercial, 2 industrial, vacant lands that they looked at. 3 Q. And I think that study was back in 4 the 1990s; is that right? We can maybe look. 5 A. We can look at that to confirm. 6 2004. 7 Q. I'm sorry, I misspoke. And this is a 8 study that you relied upon, at least partially? 9 A. Yes. 10 Q. Do you consider the Hattiesburg, 11 Mississippi, and the Atlanta, Georgia, to be 12 comparable cities and comparable real estate markets? 13 A. I believe that there are differences 14 between the markets. When I looked at these studies 15 out there that had looked at -- let's just use 16 commercial for this whole group just to make it 17 easier in conversation, that it was the one that was 18 the best match because it talked about the types of 19 properties that would be in there. 20 The effects, in my opinion, 21 professional opinion, would be less in the Ihlanfeldt 22 and Taylor study than in the Hattiesburg area, 23 because there's more substitutes, and economic 24 substitutes is a fundamental concept. If you have</p> | <p style="text-align: right;">Page 143</p> <p>1 it, please elaborate, that each of these 5,532 2 nonresidential properties would experience the same 3 percentage property value diminution? 4 A. That's what I have, is the average 5 for them. If we were going out -- this would be the 6 same thing we were just talking about with the 7 residential. If we were going out and we were 8 looking at individual ones, the Ihlanfeldt and Taylor 9 one would allow us to do individual ones that would 10 vary from apartments, to retail, to commercial. But 11 my understanding also is that the Hattiesburg records 12 don't allow that type of distinguishing. I thought 13 the average across all them was the 10 percent was 14 appropriate because we're looking at the factor again 15 what the property loss might be, not going in for 16 individual properties. If we were, we could do more 17 customizing, if we were looking at individual 18 properties. 19 Q. Dr. Boyle, are you familiar and if so 20 can you describe any other site or situation where 21 5,000 plus properties experienced the same property 22 value diminution percentage simultaneously due to a 23 single cause or factor? 24 A. Well, I don't know where this 5,000,</p> |
| <p style="text-align: right;">Page 142</p> <p>1 more different opportunities you can shift away and 2 it would reduce the effect. And so, my opinion would 3 be that there are differences but the differences 4 most likely would mean that Ihlanfeldt and Taylor 5 would underestimate the effects in Hattiesburg. 6 Q. Would you agree Atlanta is probably 7 not an appropriate comparison to Hattiesburg? 8 A. No, I would not agree, or I would not 9 have done it. 10 Q. Ms. Herrin, in her report, indicated 11 that there were 5,532 Class II properties within the 12 two and a half mile radius of the Hercules site. Do 13 you know what property types exist among these 14 nonresidential properties? 15 A. My understanding is that there are 16 apartments, there's retail, there's industrial. 17 There's a variety of different types of, you know, 18 what I'm calling in that commercial category. 19 Q. There's a wide variety of properties, 20 commercial? 21 A. I'm giving you the examples of what 22 the categories would be. 23 Q. I want to make sure I understand that 24 you've told me earlier your basis, and if you have</p> | <p style="text-align: right;">Page 144</p> <p>1 but -- 2 Q. I'm talking about the 5532 Ms. Herrin 3 indicated in her report. 4 A. You're asking about a specific 5 number. What I'm going to tell you is that if you 6 look at Ihlanfeldt and Taylor and what they found -- 7 they had large sample sizes. What they show is that 8 there are, across broad classes of properties, 9 property value diminution experienced. 10 Once again, we're not going down and 11 we're not predicting for individual properties. 12 We're predicting what the aggregate effect is on the 13 value of properties in terms of what the City of 14 Hattiesburg would lose in terms of property tax 15 revenue. 16 Q. But I want to talk about property 17 diminution evidenced by market value. And that's 18 what the taxing authorities use, isn't it? A cents 19 value, market value? 20 A. And the Ihlanfeldt and Taylor study 21 studied actual market values to come up with that. 22 Q. Do you know of any site situation 23 where these over 5,000 properties experienced the 24 same property value diminution percentage</p> |

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| <p>1 simultaneously as you said it would occur, due to a 2 single cause or factor anywhere in the United States? 3 A. I can't give you a specific one but 4 you're making it so specific it's impossible to give 5 you an example. 6 Q. Just in general. One that's just 7 comparable. 8 MR. RADNEY: That specifically has 9 5,000 properties? I think that's where he 10 got hung up. 11 BY MR. YARBOROUGH: 12 Q. Yes, all at once. You're not aware 13 of one? 14 A. No. 15 Q. Fair enough. Did I ask you earlier 16 if you had done any reading on the two products that 17 are involved here, the two contaminants? 18 A. You did not. 19 Q. Have you? 20 A. I did a little at the beginning but 21 that was not really my area of expertise, so I didn't 22 do anything since. 23 Q. Have you done any risk -- what you 24 did look at, was it research that addressed the</p> | <p>1 Q. What about construction of personal 2 residences within that area in the past two years? 3 A. I have not. 4 Q. What about construction of apartment 5 complexes within the past two years? 6 A. I have not. 7 Q. That type of market activity is not 8 germane to you in giving the opinions that you're 9 giving in this case? 10 A. No, it is not. 11 MR. YARBOROUGH: Okay. Let's go off 12 the record, if we could, as I wind down? 13 THE VIDEOGRAPHER: Off the record at 14 12:41 p.m. 15 (A recess ensued.) 16 (Exhibit No. 5 was marked for 17 identification.) 18 THE VIDEOGRAPHER: On the record at 19 12:47 p.m. 20 BY MR. YARBOROUGH: 21 Q. Dr. Boyle, during a break, I handed 22 you what I marked as Exhibit 5, which is an order 23 that was entered in the Duncan, Oklahoma, litigation 24 that you were involved. One of the named plaintiffs</p> |
| Page 146 | Page 148 |
| <p>1 impact that these two particular products might have 2 on property values, the presence of these products? 3 A. No, it was not the presence of these 4 products on property values. 5 Q. Have you ever spoken to the 6 Hattiesburg or Forrest County tax assessor or 7 collector -- 8 A. No. 9 Q. -- in connection with your work on 10 this case? You made no inquiry as to whether or not 11 there's been any reduction in the ad valorem tax 12 basis for any of the properties at issue in this 13 case? 14 A. No. 15 Q. That was not of interest to you? 16 A. I was not doing individual 17 properties. I was looking at the aggregate of -- 18 potential aggregate effect, and then the specific 19 calculations of conditions in Hattiesburg is what 20 Ms. Herrin did. 21 Q. Are you familiar with any commercial 22 business development within the two and a half mile 23 area that has taken place in the past two years? 24 A. I am not.</p> | <p>1 was Amanda Alexander versus Halliburton Energy. The 2 case is United States District Court for the Western 3 District of Oklahoma, and the order signed by Chief 4 United States District Judge Vickie Miles-LaGrange on 5 July 22, 2015. Have I described that document? 6 A. Yes. 7 Q. Now, this is an order on a motion 8 that was filed by Halliburton, to exclude plaintiff's 9 expert Kevin J. Boyle, and you are the one, in fact, 10 Kevin J. Boyle that's referred to in this order? 11 A. Yes. 12 Q. And the court did in fact exclude the 13 opinions that you offered up in that litigation in 14 Oklahoma, did she not? 15 A. I'm not an attorney but my 16 understanding is that they found that what I was 17 asked to testify to was not admissible under Oklahoma 18 law, that it wasn't a question in terms of the 19 admissibility of the information and myself as expert 20 information. 21 Q. It wasn't necessarily an attack on 22 your credentials, it was just a legal issue, is what 23 you're saying? 24 A. That's my understanding.</p> |

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| <p style="text-align: right;">Page 149</p> <p>1 Q. And specifically, I'm reading here: 2 Having carefully reviewed the parties' submissions 3 and in particular Dr. Boyle's expert report and 4 deposition testimony, the court finds that the report 5 and opinions of Dr. Boyle should be excluded. 6 Specifically, the court finds that Dr. Boyle's 7 testimony will not help the trier of fact understand 8 the evidence or determine a fact in issue as required 9 by Rule 702(a). 10 Under Oklahoma law, quote, the 11 measure of damages for permanent injury to land is 12 the difference between the reasonable market value of 13 the land immediately before the injuries, and the 14 reasonable market value of the land immediately after 15 the injuries. Further, the Oklahoma Supreme Court 16 has found that evidence of the value of the land at 17 the time of trial, two years after the alleged 18 pollution of a stream, was insufficient to establish 19 damages. 20 In his report, Dr. Boyle states that 21 his report addresses, quote, addresses long-term 22 property value diminutions, not losses immediately 23 after the contamination became public knowledge, that 24 occurred after the residential real estate market has</p> | <p style="text-align: right;">Page 151</p> <p>1 A. From an economic perspective, things 2 just don't happen instantaneously, like the Oklahoma 3 one. It takes time for them to evolve, and what I'm 4 giving is the one where there's the full information 5 available, for people to make those decisions. 6 Q. Not based on present market data and 7 transactions? 8 A. That's right. 9 MR. YARBOROUGH: I believe that's all 10 the questions I have for you, Dr. Boyle. I 11 appreciate you coming in today. 12 MR. RADNEY: Let me just take one 13 second, see if there's anything. 14 THE VIDEOGRAPHER: Off record at 15 12:52 p.m. 16 (A recess ensued, after which, the 17 deposition concluded at 12:52 p.m.) 18 19 20 21 22 23 24</p> |
| <p style="text-align: right;">Page 150</p> <p>1 adjusted to the presence of perchlorate contamination 2 and other losses incurred by property owners. 3 Have I read that correctly? 4 A. I'm assuming you've read that. 5 Q. What I wanted to know was, has there 6 been any other activity in this case since that order 7 was entered, in which you were involved? I mean, did 8 this end your involvement in this particular case. 9 Has there been an appeal, to your knowledge? 10 A. I do not know what the current status 11 of the case is. 12 Q. And the type of work that you were an 13 expert, that you prepared in this Halliburton, 14 Duncan, Oklahoma, litigation is you're addressing the 15 same type issues that you did in the expert report 16 you rendered in the Hattiesburg case? 17 MR. RADNEY: Object to the form. 18 THE WITNESS: I'm using similar 19 procedures in the two cases. 20 BY MR. YARBOROUGH: 21 Q. And you told us on multiple occasions 22 that you are not relying on present market conditions 23 to render -- and data to render the opinions that you 24 rendered in this case on diminution?</p> | <p style="text-align: right;">Page 152</p> <p>1 WITNESS SIGNATURE PAGE 2 I hereby certify that I have read my 3 deposition, and made those changes and/or corrections 4 I deem necessary, and approve the same as now 5 written. 6 7 Executed this day of , 2015. 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 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CERTIFICATE
COMMONWEALTH OF VIRGINIA
COUNTY OF ROANOKE

I, CECELIA BROOKMAN, Notary Public in and for the Commonwealth of Virginia, at Large, do hereby certify that the foregoing deposition of KEVIN BOYLE, Ph.D., was by me reduced to machine shorthand in the presence of the witness, afterwards transcribed by me by means of computer, and that to the best of my ability the foregoing is a true and correct transcript of the deposition.

I FURTHER CERTIFY that this deposition was taken at the time and place specified in the foregoing caption.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto, and have no interest in the outcome.

DATED at Roanoke, Virginia, this 7th
day of December, 2015.

CECELIA BROOKMAN, RPR

My Commission expires August 31, 2019
Notary Registration Number: 7502161

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ERRATA SHEET
DEPOSITION OF: KEVIN BOYLE, Ph.D.
IN THE MATTER OF: City of Hattiesburg v. Hercules,
Inc., et al.

DATE: December 2, 2015
I have read the foregoing deposition and I wish to
make the following changes:
(IF THERE ARE NO CHANGES, WRITE "NONE")

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